

CORNELL UNIVERSITY ANNOUNCEMENTS

VETERINARY COLLEGE

October 29, 1963

**NEW YORK STATE VETERINARY COLLEGE
A CONTRACT COLLEGE OF THE STATE UNIVERSITY
CORNELL UNIVERSITY, ITHACA, NEW YORK**

ACADEMIC CALENDAR (Tentative)

1963-1964

1964-1965

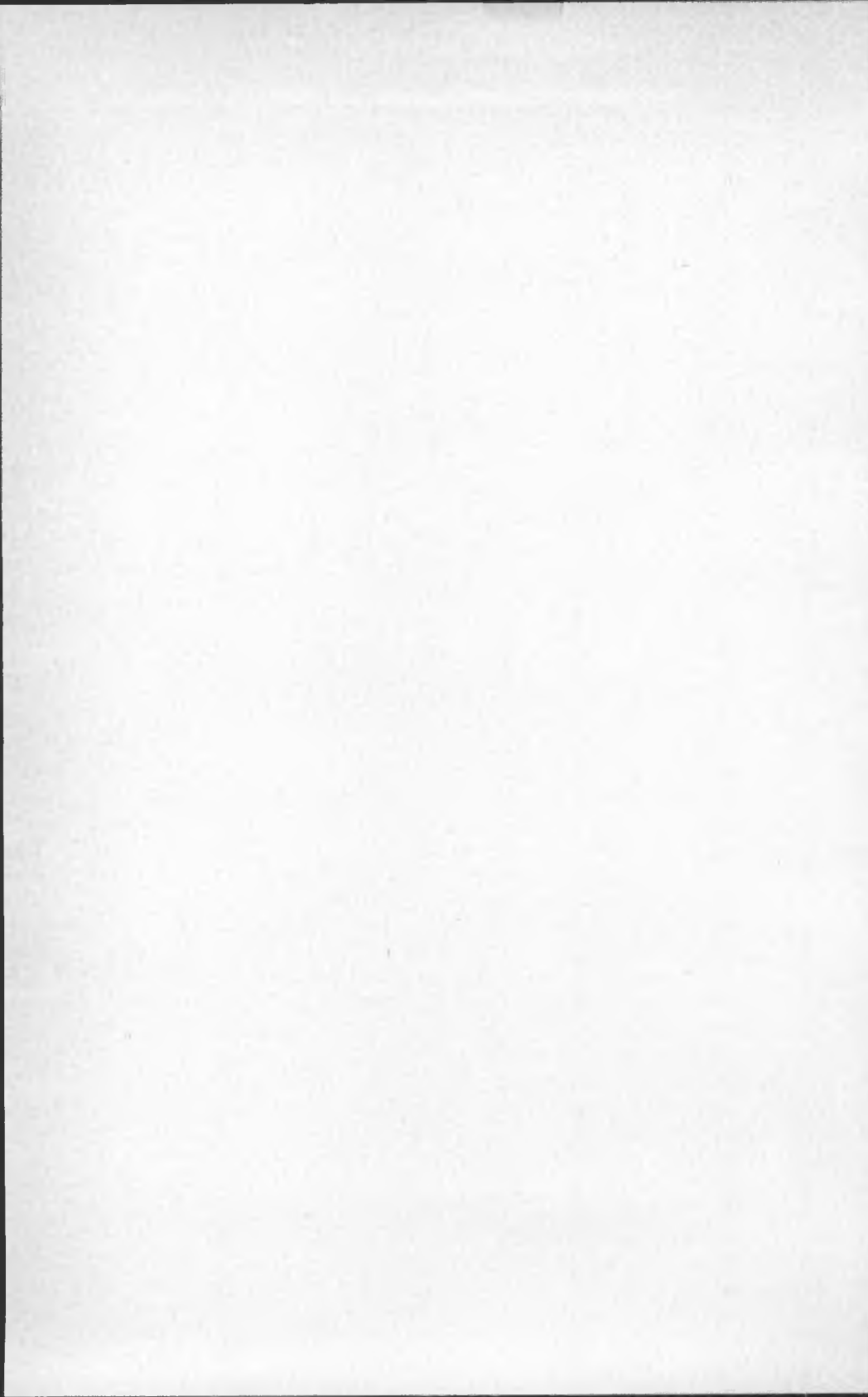
Sept. 21	...S.....	Freshman Orientation (not required of entering Veterinary students).....	Sept. 19	...S
Sept. 23	...M.....	Registration, new students.....	Sept. 21	...M
Sept. 24	...T.....	Registration, old students.....	Sept. 22	...T
Sept. 25	...W.....	Instruction begins, 1 p.m.	Sept. 23	...W
Nov. 13	...W.....	Midterm grades due.....	Nov. 11	...W
		Thanksgiving recess:		
Nov. 27	...W.....	Instruction suspended, 12:50 p.m.	Nov. 25	...W
Dec. 2	...M.....	Instruction resumed, 8 a.m.	Nov. 30	...M
		Christmas recess:		
Dec. 21	...S.....	Instruction suspended, 12:50 p.m.	Dec. 19	...S
Jan. 6	...M.....	Instruction resumed, 8 a.m.	Jan. 4	...M
Jan. 25	...S.....	First-term instruction ends.....	Jan. 23	...S
Jan. 27	...M.....	Second-term registration, old students.....	Jan. 25	...M
Jan. 28	...T.....	Examinations begin.....	Jan. 26	...T
Feb. 5	...W.....	Examinations end.....	Feb. 3	...W
Feb. 6	...Th.....	Midyear recess.....	Feb. 4	...Th
Feb. 7	...F.....	Midyear recess.....	Feb. 5	...F
Feb. 8	...S.....	Registration, new students.....	Feb. 6	...S
Feb. 10	...M.....	Second-term instruction begins.....	Feb. 8	...M
Mar. 27	...F.....	Midterm grades due.....	Mar. 26	...F
		Spring recess:		
Mar. 28	...S.....	Instruction suspended, 12:50 p.m.	Mar. 27	...S
Apr. 6	...M.....	Instruction resumed, 8 a.m.	Apr. 5	...M
May 30	...S.....	Second-term instruction ends.....	May 29	...S
June 1	...M.....	Examinations begin.....	May 31	...M
June 9	...T.....	Examinations end.....	June 8	...T
June 15	...M.....	Commencement Day.....	June 14	...M

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**NEW YORK STATE
VETERINARY COLLEGE
AT CORNELL UNIVERSITY**

1963-1964

**New York State Veterinary College
A Contract College of the State University
Cornell University, Ithaca, New York**



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Bruce W. Widger, D.V.M.

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R. W. KIRK
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Class of 1966
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R. E. HABEL
P. P. LEVINE

Class of 1965
A. W. STINSON
F. H. FOX
C. E. STEVENS

Class of 1964
P. OLAFSON
A. F. SELLERS
D. D. DELAHANTY

* The Dean is ex officio a member of all committees.

FACULTY

JAMES A. PERKINS, A.B., Ph.D., President of the University.

EMERITUS PROFESSORS

DUKES, H. HUGH, B.S., D.V.M., M.S., D.H.C., Professor of Veterinary Physiology, Emeritus.

DYE, JOSEPH A., B.A., Ph.D., Professor of Physiology, Emeritus.

GILMAN, HERBERT L., D.V.M., M.S., Ph.D., Professor of Veterinary Bacteriology, Emeritus.

STEPHENSON, HADLEY C., B.S., D.V.M., Professor of Veterinary Therapeutics and Small Animal Diseases, Emeritus.

PROFESSORS

BAKER, DONALD W., B.S., D.V.M., Ph.D., Professor of Veterinary Parasitology.

BAKER, JAMES A., B.S., M.S., D.V.M., Ph.D., Professor of Veterinary Virology and Director of the Veterinary Virus Research Institute.

BENTINCK-SMITH, JOHN, A.B., D.V.M., Professor of Pathology.

BOYER, CLYDE I., JR., V.M.D., M.S., Professor of Avian Diseases.

BRUNER, DORSEY W., B.S., D.V.M., Ph.D., Professor of Veterinary Bacteriology.

COMAR, CYRIL L., B.S., Ph.D., Professor of Physical Biology and Head of the Department of Physical Biology. (On sabbatic leave, 1963-1964.)

DANKS, A. GORDON, B.S., D.V.M., Professor of Veterinary Surgery and Director of Student Administration.

DELAHANTY, DONALD D., D.V.M., M.S., Professor of Veterinary Surgery, Head of the Department of Surgery, and Director of the Large Animal Hospital.

EVANS, HOWARD E., B.S., Ph.D., Professor of Veterinary Anatomy and Secretary of the College.

FABRICANT, JULIUS, B.S., V.M.D., M.S., Ph.D., Professor of Avian Diseases.

FINCHER, MYRON G., D.V.M., M.S., Professor of Veterinary Medicine, Head of the Department of Medicine and Obstetrics, and Director of the Ambulatory Clinic.

FOX, FRANCIS H., D.V.M., Professor of Veterinary Medicine and Obstetrics.

GASTEIGER, E. L., JR., A.B., M.S., Ph.D., Professor of Physical Biology.

GILLESPIE, JAMES H., V.M.D., Professor of Veterinary Bacteriology.

HABEL, ROBERT E., D.V.M., M.Sc., M.V.D., Professor of Veterinary Anatomy and Head of the Department of Anatomy.

KIRK, ROBERT W., B.S., D.V.M., Professor of Small Animal Medicine.

LEONARD, ELLIS P., B.S., D.V.M., Professor of Small Animal Surgery, Head of the Department of Small Animal Medicine and Surgery, and Director of the Small Animal Clinic.

- LEVINE, P. PHILIP, B.S., D.V.M., M.S., Ph.D., Professor of Poultry Diseases and Head of the Department of Avian Diseases.
- MCENTEE, KENNETH, D.V.M., Professor of Veterinary Pathology.
- OLAFSON, PETER, D.V.M., M.S., Professor of Veterinary Pathology and Head of the Department of Pathology and Bacteriology.
- PECKHAM, MALCOLM C., B.S., D.V.M., Professor of Avian Diseases.
- POPPENSIEK, GEORGE C., V.M.D., M.S., Professor of Microbiology and Dean of the College.
- RICKARD, CHARLES G., D.V.M., M.S., Ph.D., Professor of Veterinary Pathology.
- ROBERTS, STEPHEN J., D.V.M., M.S., Professor of Veterinary Medicine and Obstetrics.
- SELLERS, ALVIN F., V.M.D., M.S., Ph.D., Professor of Veterinary Physiology and Head of the Department of Veterinary Physiology.
- SHEFFY, BEN E., B.S., M.S., Ph.D., Professor of Nutrition, Veterinary Virus Research Institute.
- WASSERMAN, ROBERT H., B.S., M.S., Ph.D., Professor of Radiation Biology and Acting Head of the Department of Physical Biology.
- WHITLOCK, JOHN H., D.V.M., M.S., Professor of Veterinary Parasitology.

ASSOCIATE PROFESSORS

- BERGMAN, EMMETT N., B.S., M.S., D.V.M., Ph.D., Associate Professor of Veterinary Physiology. (On leave, 1963-1964.)
- BRUST-CARMONA, HECTOR, B.S., M.D., Visiting Associate Professor in the Department of Physical Biology.
- CALNEK, BRUCE W., D.V.M., M.S., Associate Professor of Poultry Diseases.
- DUNLOP, ROBERT H., B.S., D.V.M., Ph.D., Associate Professor of Veterinary Pharmacology.
- EVANS, JOHN V., B.V.Sc., B.Sc., M.R.C.V.S., Acting Associate Professor of Veterinary Physiology.
- KROOK, LENNART P., B.V.M., D.V.M., Ph.D., Associate Professor of Veterinary Pathology.
- LEE, KYU M., M.D., Ph.D., Associate Professor of Virology.
- LENGEMANN, FRED W., B.S., M.N.S., Ph.D., Associate Professor of Radiation Biology.
- LOOMIS, WENDELL K., D.V.M., Associate Professor of Veterinary Surgery.
- NANGERONI, LOUIS L., B.S., D.V.M., M.S., Associate Professor of Veterinary Physiology.
- STEVENS, CHARLES E., B.S., M.S., D.V.M., Ph.D., Associate Professor of Veterinary Physiology.
- WINTER, ALEXANDER J., B.S., D.V.M., M.S., Ph.D., Associate Professor of Pathology and Bacteriology.

ASSISTANT PROFESSORS

- BECK, ALBERT M., B.S., D.V.M., Assistant Professor of Small Animal Medicine.
- CARMICHAEL, LELAND E., A.B., D.V.M., Ph.D., Assistant Professor in the Department of Pathology and Bacteriology.
- CASARETT, ALISON P., B.S., M.S., Ph.D., Assistant Professor in the Department of Physical Biology.

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- DE LAHUNTA, ALEXANDER, D.V.M., Ph.D., Assistant Professor of Veterinary Anatomy.
- HILLMAN, ROBERT B., A.B., D.V.M., M.S., Assistant Professor of Veterinary Medicine and Obstetrics.
- LOWE, JOHN E., D.V.M., M.S., Assistant Professor of Veterinary Surgery.
- NORCROSS, NEIL L., A.B., M.S., Ph.D., Assistant Professor of Immunochemistry.
- ROSS, GEORGE E., JR., B.S., D.V.M., Assistant Professor of Small Animal Medicine and Surgery.
- STINSON, AL W., B.S., D.V.M., M.S., Assistant Professor of Veterinary Anatomy.
- TAPPER, DANIEL N., B.S., V.M.D., Ph.D., Assistant Professor in the Department of Physical Biology.
- WOOTTON, JOHN F., B.S., M.S., Ph.D., Assistant Professor of Physiological Chemistry.

STAFF

- AHRENS, FRANKLIN A., B.S., D.V.M., Assistant in the Department of Veterinary Physiology.
- ALEXANDER, RENEE, B.S., M.S., Ph.D., Research Associate in the Department of Physical Biology.
- ALLEN, ROSANNA P., A.B., B.S. (Lib. Serv.), Associate Librarian.
- ANDERSON, JOHN J. B., A.M., A.M.T., A.B., Assistant in the Department of Physical Biology.
- ANGSTROM, CLEMENT I., D.V.M., Director of Laboratory, Poultry Diseases Program (Kingston).
- BARTHOLOMEW, RICHARD C., D.V.M., Medical Interne in Medicine and Obstetrics.
- BENSON, THOMAS F., B.S., D.V.M., M.S., Director of the Diagnostic Laboratory.
- BOKELMAN, DELWIN L., B.S., D.V.M., Assistant in the Department of Pathology and Bacteriology.
- BOLDT, V. L., D.V.M., Field Veterinarian, Mastitis Program (East Aurora).
- BROOKS, ANTOINE L., B.S., M.S., Assistant in the Department of Physical Biology.
- BROWN, HAROLD I., D.V.M., Field Veterinarian, Mastitis Program (Earlville).
- BUCKNOR, ARTHUR J. E., B.S., Assistant in the Department of Pathology and Bacteriology.
- CAMPBELL, SAMUEL G., M.V.Sc., B.V.M.S., M.R.C.V.S., Assistant in Veterinary Bacteriology.
- CHENEY, JOHN B., D.V.M., Field Veterinarian, Mastitis Program (Canton).
- CUMMINGS, JOHN F., B.S., D.V.M., Assistant in the Department of Anatomy.
- DOUGHERTY, ELLSWORTH, III, B.S., V.M.D., Director of Laboratory, Turkey and Duck Program (Eastport).
- DUNN, HENRY O., B.S., M.S., Ph.D., Research Biologist in the Department of Pathology and Bacteriology.
- EBEL, JOSEPH G., B.S., Graduate Teaching Assistant, Department of Physical Biology.
- ESGUERRA, VIRGILIO C., D.V.M., Visiting Fellow in the Department of Veterinary Physiology.
- FIELD, LINCOLN E., D.V.M., Field Veterinarian (Ithaca).
- FOUAD, MOHAMED T. A., B.V.Sc., M.Sc., Assistant in the Veterinary Virus Research Institute.

- FUERST, WILLIAM F., JR., B.S., M.S., Teaching Associate in the Department of Veterinary Physiology.
- GEORGI, JAY R., D.V.M., Ph.D., Research Associate in the Department of Physical Biology.
- GIATTAS, CHRISTOPHER S., Diploma Vet. Med., Visiting Fellow in the Department of Veterinary Physiology.
- GRIES, CHRISTIAN L., D.V.M., Assistant in the Department of Pathology and Bacteriology.
- GUTHRIE, RICHARD S., D.V.M., Supervising Veterinarian, Mastitis Program (Ithaca).
- HAGAN, JEAN R., D.V.M., Director of Laboratory, Poultry Disease Program (Oconto).
- HANSON, JENNIFER M., B.Sc., Ph.D., Research Associate in the Department of Veterinary Physiology.
- HERZOG, RITA K., B.S., M.S., Research Assistant in the Department of Physical Biology.
- HILTZ, FREDERICK L., S.B.E.E., S.M.E.E., Assistant in the Department of Physical Biology.
- HIMES, JAMES A., B.S., D.V.M., Assistant in the Department of Physiology.
- HWANG, JEN, D.V.M., M.S., Ph.D., Duck Disease Specialist (Eastport).
- JOHNSON, SETH D., D.V.M., Field Veterinarian, Mastitis Program (Ithaca).
- KAHRS, ROBERT F., D.V.M., M.S., Research Assistant, Department of Pathology and Bacteriology.
- KALLFELZ, FRANCIS A., D.V.M., Research Assistant in the Department of Physical Biology.
- KEHIOE, JOHN M., D.V.M., Assistant in the Department of Pathology and Bacteriology.
- KINGSBURY, JOHN M., Ph.D., Lecturer; Associate Professor of Botany, College of Agriculture.
- KORMAN, RUTH Z., B.S.A., M.S., Ph.D., Research Associate in the Department of Physical Biology.
- KRAMER, LAWRENCE L., B.S., M.S., D.V.M., Surgical Interne in Veterinary Surgery.
- LAYTON, E. W., Farrier, Department of Veterinary Surgery.
- LEIBOVITZ, L., B.A., B.S., V.M.D., Field Veterinarian (Eastport).
- LEVITAN, HERBERT, B.E.E., Research Assistant in the Department of Physical Biology.
- LINQUIST, WESLEY, D.V.M., Field Veterinarian, Mastitis Program (Kingston).
- LORENZEN, JOAN A., D.V.M., Medical Interne in Small Animal Medicine and Surgery.
- MATHER, MELVIN F., D.V.M., Medical Interne in Medicine and Obstetrics.
- MELICK, PAUL W., D.V.M., Assistant in the Department of Pathology and Bacteriology.
- MENZIES, ROBERT A., B.S., M.S., Assistant in the Departments of Pathology and Bacteriology and Physical Biology.
- MICHAELSON, SOLOMON M., B.S., D.V.M., Special Lecturer, Department of Physical Biology.
- MORROW, DAVID A., B.S., D.V.M., Assistant in the Department of Pathology and Bacteriology.
- NAROTSKY, SAUL, D.V.M., Director of Laboratory, Poultry Disease Program (East Aurora).

6 CORNELL VETERINARY COLLEGE

- NEWSON, MARION, R.N., Medical Illustrator in the Department of Anatomy.
- PAREKH, CHANDRA K., B.S., M.S., Ph.D., Research Associate in the Department of Physical Biology.
- POST, JOHN E., B.S., D.V.M., Research Oncologist in the Department of Pathology and Bacteriology.
- PRICE, JESSIE V., B.S., M.S., Ph.D., Research Specialist in Avian Diseases (Eastport).
- REINAP, MIA, B.S., B.S. (Lib. Sci.), Librarian of the Flower Library.
- ROBERTS, JOHN A., B.V.Sc., Ph.D., Research Associate in the Veterinary Virus Research Institute.
- ROE, WALTER E., B.S., D.V.M., M.S., Assistant in the Department of Physiology.
- SCANLAN, JUDITH L., D.V.M., Assistant in the Department of Anatomy.
- TAPPER, NANCY H., A.B., Special Lecturer in the Department of Physical Biology.
- TAYLOR, ALAN N., B.S., M.S., Research Associate in the Department of Physical Biology.
- TEMPLE, HARRY C., D.V.M., Field Veterinarian, Mastitis Program (Kingston).
- THOMPSON, JOHN C., JR., B.S., M.S., Ph.D., Research Associate in the Department of Physical Biology.
- THOMSON, REGINALD G., D.V.M., M.V.Sc., Assistant in the Department of Pathology and Bacteriology.
- TODD, GLEN C., D.V.M., Teaching Associate in the Department of Pathology and Bacteriology.
- TRENHOLM, H. LOCKSLEY, B.Sc., Assistant in the Department of Veterinary Physiology.
- VAN KRUIINGEN, HERBERT J., D.V.M., Assistant in the Department of Pathology and Bacteriology.
- WAGNER, WILLIAM C., D.V.M., Research Veterinarian, Bovine Sterility (Ithaca).
- WENTWORTH, RICHARD A., B.S., M.S., Ph.D., Research Associate in the Department of Physical Biology.
- WILLOUGHBY, RUSSELL A., D.V.M., Assistant in the Department of Pathology and Bacteriology.
- WING, PATRICIA C., D.V.M., Assistant in the Department of Veterinary Surgery.
- WITTER, RICHARD L., B.S., D.V.M., M.S., Assistant in the Department of Avian Diseases.
- ZARKOWER, ARIAN, D.V.M., M.S., Research Assistant in the Department of Pathology and Bacteriology.

MEMBERS OF OTHER FACULTIES WHO TEACH VETERINARY STUDENTS

- ELLIOT, J. MURRAY, Ph.D., Assistant Professor of Animal Husbandry.
- HOGUE, DOUGLAS E., Ph.D., Associate Professor of Animal Husbandry.
- HUTT, FREDERICK B., Ph.D., D.Sc., Professor of Animal Genetics.
- JOHNDREW, ORVIS F., JR., M.S., Associate Professor of Poultry Husbandry.
- KINGSBURY, JOHN M., Ph.D., Associate Professor of Botany.
- WHITE, JAMES C., Ph.D., Professor of Dairy Industry.

SPECIAL LECTURERS, 1962-1963

- ANDERSON, DAN J., President, AVMA, and Large Animal Practitioner, Fort Worth, Texas.
- BACHRACH, ALAN, Medical Director of Bachrach's Animal Hospital, Philadelphia, Pennsylvania.
- BRUCE, W. G., Professor of Entomology, North Carolina State College, Raleigh, North Carolina.
- BURCH, GEORGE E., Deputy Director, Division of Animal Industry, Department of Agriculture and Markets, Albany.
- CARPENTER, KENDALL S., Associate Professor of Business Management, Cornell University.
- CRAWFORD, J. STUART, Small Animal Practitioner, New Hyde Park.
- FORSYTHE, RODNEY A., Practitioner, Batavia.
- HANSEL, WILLIAM, Professor of Animal Husbandry, Cornell University.
- HANSEN, HARRY, General Practitioner, Ballston Springs.
- HOPSON, GEORGE, Sales Manager, Southern Division, DeLaval Separator Corporation, Poughkeepsie.
- MAYER, PAT, Assistant Instructor in the Department of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania.
- MIDDAGH, W. S., Chief of Agricultural Development, Bureau for Africa and Europe AID, Washington, D.C.
- NADLER, HAROLD E., Assistant Director, New York State Department of Agriculture and Markets, Bath.
- RAKER, CHARLES W., Professor of Veterinary Surgery, and Chief of Surgery, Department of Applied Veterinary Medical Sciences, University of Pennsylvania, Philadelphia, Pennsylvania.
- SCHIEDY, SAMUEL F., Veterinary Medical Director, Smith Kline & French Laboratories, Philadelphia, Pennsylvania.
- STAMP, NEAL R., University Counsel, Cornell University.
- STEINFELDT, EDWARD, Small Animal Practitioner, Cortland.
- STOLL, ROBERT S., Large Animal Practitioner, Rome, Pennsylvania.
- TANZER, HERBERT, Practitioner, Kings County Veterinary Hospital, Brooklyn.
- WARREN, ERNEST N., Professor of Law, Cornell University.
- WOELFFER, E. A., Cattle Practitioner, Oconomowoc, Wisconsin.
- ZOLLMAN, PAUL E., Consultant to the Staff of the Mayo Clinic, Mayo Foundation for Medical Education and Research, Rochester, Minnesota.

VISITING STAFF, 1962-1963

- CROFTON, HARRY D., Bristol, England.
- DE BOOM, H. P. A., Onderstepoort, Pretoria, South Africa.
- DENNIS, STANLEY M., South Perth, Australia.
- HART, BENJAMIN L. III, Excelsior, Minnesota.
- ICHIKAWA, SANTA, Tokyo, Japan.
- JOHNSON, CARL J., Columbus, Ohio.
- MIKAMI, SHIN-ICHI, Morioka, Japan.
- ORSTADIUS, KERSTIAN H., Stockholm, Sweden.
- WISWALL, IRVING W., Batavia.



COLLEGE BUILDINGS AND RESEARCH FACILITIES

THE NEW YORK STATE VETERINARY COLLEGE, established by an act of the State Legislature in 1894, is on the campus of Cornell University at Ithaca, a city of approximately 30,000 permanent residents, situated in the famous Finger Lakes Region of New York at the head of Cayuga Lake. The city is in the south-central part of the state, about 260 miles from New York. It has air connections with Boston, New York, Buffalo, Detroit, and other cities by way of Mohawk Airlines.

In 1957 the Veterinary College moved into new buildings at the eastern edge of the Cornell campus. Of a plot of about twenty acres, the buildings occupy nearly twelve acres, leaving the remainder for paddocks and exercise lots for animals. They constitute one of the finest physical plants possessed by any of the world's veterinary colleges. The equipment, of the most modern type, is ample for teaching and research in the basic and clinical sciences.

THE VETERINARY COLLEGE LIBRARY

The College is fortunate in being a part of a great University where it is possible to obtain the assistance and use the facilities of great scholars in many disciplines. One advantage is access to the various libraries of the University, which contain more than 2,413,000 volumes and 21,000 current periodicals and society transactions. Of the greatest usefulness to the College is the special Veterinary Library, which is housed in Schurman Hall. This library consists of more than 37,000 volumes and approximately 668 current periodicals in the field of medical sciences.

The Veterinary Library was initially endowed by a gift from Roswell P. Flower, who was Governor of the State of New York when the College was founded. For this reason it was named, in his honor, the Flower (Veterinary) Library. It is maintained partly on endowment funds and partly on appropriations from the State.

OFF-CAMPUS RESEARCH FACILITIES

In addition to the superb facilities on the campus, extramural facilities for research on infectious, parasitic, and metabolic diseases of farm animals and small animals have been constructed, for the most part on Snyder Hill, about three miles from the campus, on a tract of 133 acres.

Besides the many buildings for housing animals, most of which have small pastures, exercise lots, or paddocks of their own, a number of laboratory buildings have been built for staff people stationed there for research.

Poultry Disease Research

Poultry disease research is done both on the campus in conjunction with the diagnostic and teaching laboratory and at the research laboratory on Snyder Hill about three miles from the campus. A 41-unit disease isolation building forms part of the facilities on the campus.

The Snyder Hill facilities consist of a two-story laboratory well equipped for research in the bacterial, virus, and parasitic diseases of chickens and turkeys. A respiratory disease-free flock of chickens is maintained for the production of chicks and embryos. There are 28 separate pens for holding experimental birds on a tract of land of several acres.

An excellently equipped duck disease research laboratory is maintained at Eastport, Long Island, with the cooperation of the Long Island Duck Research Cooperative. Facilities for housing investigators and graduate students are available.

The Veterinary Virus Research Institute

In September, 1950, the Board of Trustees of Cornell University established a new unit in the New York State Veterinary College: the Veterinary Virus Research Institute. Formation of the Cornell Research Laboratory for Diseases of Dogs was approved as a section of the Institute.

The primary objective of the Institute is to prevent loss from infectious diseases in animals. Toward this end, basic research is conducted upon organisms which cause disease in order to increase knowledge of their nature, means of spread, and methods whereby their spread can be controlled. Another objective of the Institute is the training of workers in the field of virology. Determined by the amount of laboratory space available, a limited number of graduate students and postgraduate visiting investigators are accepted.

The Virus Institute is on Snyder Hill, near the University but far enough in the country so that farmland is available for rearing disease-free animals and a part of the uncontaminated feed supplies necessary. Believed to be the only one of its kind in the world is a herd of disease-free cattle, given by the Rockefeller Institute to the Veterinary Virus Research Institute to supply cattle ideally suitable for research work. Also unique is a kennel building given by the Gaines Dog Research Center for rearing dogs free from disease.

After consideration of the many technical difficulties involved in work with viruses and other living organisms that can be airborne or trans-

ferred accidentally in other ways, three buildings were designed and constructed. These contain six modern and fully equipped laboratories for research and teaching, in addition to a library, offices, a tissue culture laboratory, and animal isolation units that can be cleaned and decontaminated effectively.

Another isolation building, acquired by matching funds from the United States Public Health Service and private donors, houses other disease-free animals including pigs, chickens, guinea pigs, rabbits, and mice.

Sheep Disease Research

A tract of 75 acres of land on Turkey Hill, particularly suitable for research on internal parasites of sheep, has been equipped for maintaining a flock of sheep. On this tract a 10-acre pasture is irrigated artificially to maintain a natural infestation of internal parasites under controlled conditions.

A new sheep barn including facilities for raising experimental animals under helminthologically sterile conditions has recently been constructed.

Diseases of the Reproductive Tract in Cattle

Facilities are available for housing approximately 100 heifers and 30 bulls which are used for the study of reproductive diseases of dairy cattle.

Radiation Biology

A field laboratory including a radiation exposure facility and a whole body counter for fundamental studies in radiation biology has been constructed on a 40-acre tract of land provided by the University. This facility is an integral part of the Department of Physical Biology.

ADMISSION AND ENTRANCE REQUIREMENTS

SINCE the fall of 1949 the minimum education requirements for admission to the New York State Veterinary College have been the satisfactory completion of two years' study in an approved college or university. The two years of college study must include:

English—6 semester hours

Physics—6 semester hours, including laboratory

Biology or Zoology—6 semester hours, including laboratory

Chemistry—12 semester hours, including organic chemistry with laboratory.

The courses in English, physics, and biology or zoology should cover at least one academic year each. The work in chemistry should cover at least one and a half academic years and must include a course in organic chemistry with laboratory work. A course in zoology is preferred to a course in biology.

An applicant is urged not to take courses identical to, or substantially identical to, those in the veterinary curriculum.

An applicant for admission is expected to have facility in the use of the English language in speech and composition. Therefore, a course in oral and written composition, or in speech, is strongly recommended.

The choice of other courses is left to the student, but the following are recommended: quantitative chemical analysis, a modern foreign language, history, economics, government, mathematics, biometry, philosophy, psychology, comparative anatomy, general physiology. It is desirable to have a course in botany. It is suggested that not more than 30 semester hours of the minimum requirements be devoted to chemistry, biology or zoology, and physics.

TWO YEARS OF STUDY has been interpreted as meaning the passing of one half as many semester credit units as are required by the particular institution for its baccalaureate degrees. Most institutions which are run on a semester basis require 120 units, but some require 124, and some even 128. At least 60 semester units must be presented, therefore, and in some instances 62 or more.

A REGISTERED COLLEGE is one which is registered with, and its curriculum approved by, the New York State Education Department. All colleges within New York State which are authorized to grant bacca-

laureate degrees are registered and approved. This is not true, however, of all such institutions outside New York State. In general, practically all of the larger colleges and universities are registered. If in doubt as to whether any particular school is registered, one should address correspondence to the State Education Department, Albany, N.Y., and not to this College.

THE FARM PRACTICE REQUIREMENT can be met during summer vacations, but at least one half of the experience must be obtained prior to entrance to the Veterinary College. A total of 20 farm practice points is required, of which at least 10 must be for experience with livestock. A minimum of 10 points, including not less than 5 for livestock, must be presented to qualify for admission. By livestock, farm animals are meant. Dogs and cats are not included, and not more than 3 points may be claimed for experience with poultry.

Farm practice points are awarded on the basis of tests administered by the Office of Student Practice, New York State College of Agriculture, Ithaca, N.Y. Except for students who have previously enrolled in the College of Agriculture and whose farm practice scores are available to it, the Committee on Admissions of the Veterinary College will estimate the experience of all candidates. All who are admitted without farm practice ratings by the Office of Student Practice will be required to take the tests after admission, and all who are found to be deficient will be required to make up their deficiencies during the first two summer vacations while they are in college.

Applicants who have been reared on farms where livestock are kept should easily meet all requirements. Those who are not farm-reared will have to spend at least three months as full-time farm workers with some responsibility for farm animals to qualify for admission. The full requirements can hardly be met by less than six months of such experience. Little credit will be allowed for experience obtained before the age of 14 years.

This requirement is applicable only to men students who are United States citizens; nevertheless, women applicants will improve their chances of acceptance by acquiring as much experience with farm animals and farm life as they can get.

Whenever possible, prospective applicants are urged to obtain the full experience required before submitting their applications. In a highly competitive situation, those who have the full requirements will have an advantage over those who have only the minimum.

THE APPLICANT should write, after July 1 of the year preceding the one in which admission is desired, to the Office of Admissions, Day Hall, Ithaca, N.Y., requesting the application forms for admission to the Veterinary College. The Office of Admissions will require a transcript of the applicant's college record as well as other credentials. Full information will be furnished with the application form.

THE NUMBER of students that can be admitted annually is limited. It is likely that the number of applicants who can meet the scholastic requirements will exceed the number that can be accepted. A Committee on Admissions of the faculty of the Veterinary College will select those to be admitted after considering not only the formal preparation but also the available evidence bearing on each applicant's character, seriousness of purpose, and fitness for the work that he proposes to undertake. The committee will require a personal interview, whenever that is feasible.

PRIORITY of application is not necessarily a determining factor in the selection of students to be admitted; nevertheless, the gathering and the weighing of the necessary evidence require time, and, as the committee will begin filling the eligible list early in the year, it is advantageous to the candidate to file his application early. March 1 is the latest date for filing applications. Students who have not completed the work required for admission but expect to do so prior to July 1 may apply, and the committee will act on the applications provisionally.

FOREIGN STUDENTS are usually required to take at least one year of the preveterinary study in an approved college or university in the United States.

RULES COVERING ADMISSION

Applicants for admission must not only satisfy the entrance requirements but must also comply with certain rules of the University, as follows:

1. Every candidate for admission who receives notice of approval of his application must deposit \$45. Candidates are warned not to send cash through the mails. A check, draft, or money order should be made payable to *Cornell University* and should be sent to the Office of Admissions, Day Hall, Ithaca, N.Y.

If the candidate matriculates, the deposit is credited to his account to cover matriculation charges and certain graduation expenses and to establish a fund for undergraduate and alumni class activities.

If the candidate withdraws before the due date of his deposit, the deposit will be refunded. No refund will be made to an applicant who withdraws after the due date of the deposit; in that case the whole deposit will be retained by the University in payment of its costs and intangible losses resulting from such withdrawal.

2. Each entering student is expected to assume personal responsibility for fulfilling the following health requirements adopted by the trustees of Cornell University. Permission to register for a new semester will not be granted unless all health requirements pertaining to the previous semester have been fulfilled.*

* Prospective graduate students should consult the *Announcement of the Graduate School* for health requirements on entrance.

IMMUNIZATION . . . A satisfactory certificate of immunization against small-pox, on the form supplied by the University, must be submitted before registration. It will be accepted as satisfactory only if it certifies that within the last three years a successful vaccination has been performed. If this requirement cannot be fulfilled by the student's home physician, opportunity for immunization will be offered by the Cornell medical staff during the student's first semester, with the cost to be borne by the student. If a student has been absent from the University for more than three years, immunity will be considered to have lapsed, and a certificate of revaccination must be submitted.

X-RAY . . . Every student is required to have a chest X-ray. He may (1) present a chest film, made by a private physician, on or before entering Cornell, provided that it was obtained within six months of initial registration and is of acceptable quality; *or* (2) he may present a chest X-ray report, provided that the radiograph was taken within six months of initial registration and contains the film number and name and address of the X-ray facility, and is signed by a radiologist; *or* (3) he may have a chest X-ray at Cornell during the orientation period or at some other specified time shortly thereafter, in which case the charge will be included in the registration fee. When a student who has been away from the University for more than a year, wishes to re-enter, he must, at his own expense, once more fulfill the chest X-ray requirement.

MEDICAL EXAMINATION . . . Every undergraduate student is required to have a medical examination. (This includes special students who must meet undergraduate requirements such as physical education, etc.) An undergraduate student accepted for admission will be sent forms to be filled out by his home physician and returned promptly to the Gannett Medical Clinic. A University physician will review the material before it becomes part of the student's permanent health record. All information given is confidential. After arrival at Cornell, a specialized recheck of any questionable medical items will be made, and if need for re-examination or follow-up is indicated, an appointment to consult a physician at the Clinic will be given. When a student has been away from the University for more than a year, he must, upon re-entrance, submit an interim health history on a form to be obtained from the University.

TETANUS TOXOID . . . Undergraduate students, including special students enrolled in one-year or two-year courses, are required to be immunized to tetanus through use of tetanus toxoid. The University has adopted this rule to avoid reactions, often serious, if antitoxin (horse serum) is administered at the time of injury. Immunity through toxoid offers the advantage of protection without the risk of antitoxin reaction.

Active immunization is to be acquired within nine months of initial registration unless the student's home physician is unable to give the toxoid. If there has been no previous immunization, an original series of two or three doses, depending on the type used, spaced at least one month apart will be necessary. This will be followed by a booster dose one year later. If there has been previous immunization within ten years, reactivation by a single booster dose is required for entrance to Cornell. If previous immunization was ten or more years ago, two booster doses, spaced one month or more apart, are required. After entrance, five years is considered the maximum limit between booster doses, with a reactivating dose to be given at any time in case of injury.

Certification of immunization by the student's home physician is to be reported on the immunization form supplied by the University. Students unable to obtain the immunization at home will be given the opportunity, during the first semester, to obtain it from the Cornell medical staff or any Ithaca physician. If it is received from the former, a charge comparable to the average physician's fee will be made. Opportunity to obtain the required booster dose one year later, and further booster doses as recommended by recognized medical authorities will also be given.

ADMISSION TO ADVANCED STANDING

Applicants for admission to advanced standing as members of the second-, third-, or fourth-year class must present the necessary educational qualifications for admission to the first-year class and must pass satisfactory examinations in all of the work for which they desire advanced credit, or offer satisfactory certificates of the completion of this work in other schools whose entrance requirements and courses of study are equivalent to those of this College. No person will be admitted to any advanced class except at the beginning of the college year in September.

ADMISSION TO THE GRADUATE SCHOOL

Graduates of this College or other colleges may enter the Graduate School of Cornell University and pursue work for the M.S., Ph.D., or D.Sc. in V.M. in the Veterinary College and allied departments of the University. A prospective graduate student should consult the *Announcement of the Graduate School* and apply to the Dean of the Graduate School.

Some of the new buildings of the Veterinary College: Schurman Hall, administration; the Flower Library; and the Walter L. Williams Clinic.



Applicants for graduate study from countries other than the United States and Canada are requested to include in their credentials the results of the Graduate Record Examination (Aptitude) except in cases where this examination is not given in reasonable proximity to the student's home. Where the Graduate Record Examination is not available the student is requested to submit, instead, the results of the College Entrance Board Examination (Scholastic Aptitude Tests).

The Veterinary College, alone or in combination with other departments of the University, offers advanced students excellent opportunities for study and investigation. Its situation gives it abundant and varied material for research, and it has ample facilities for the prosecution of such work. It encourages graduate and advanced students to carry on independent investigations. Courses of study especially adapted to advanced work and research will be found among those listed on pages 32-45 of this Announcement.

A student who holds the degree of Doctor of Veterinary Medicine from a recognized college or school in the United States or Canada may now transfer one year's residence credit for that work toward the Doctor of Philosophy degree whenever his Special Committee certifies that the work done in the years of professional study formed an integral part of the work required for the doctorate and was of equivalent quality.*

The Degree of Doctor of Science in Veterinary Medicine (D.Sc. in V.M.)

Admission to candidacy for the degree of Doctor of Science in Veterinary Medicine is a function of the Division of Veterinary Medicine of the Graduate School. The following requirements must be met before admission to candidacy:

1. The candidate must have been graduated from an approved school of veterinary medicine for at least five years.
2. He must have demonstrated by published papers his ability to do independent meritorious research.
3. He must have offered satisfactory evidence to the Division of his ability to read accurately the French and German † literature in his field.

Candidates who have no graduate credit beyond their D.V.M. degree must complete not less than four residence units to qualify for the degree. ‡ Those who have a Master of Science degree or its equivalent from an approved college or university may complete the minimum residence credit by acquiring at least two additional units.

* By action of the faculty, January 28, 1955.

† In special cases other languages may be accepted according to the provisions of Paragraphs 118 and 119 of the *Code of Legislation* of the Graduate faculty.

‡ It is considered that at least two units of work leading to the degree of Doctor of Veterinary Medicine are an integral part of this professional degree.

After a candidate has been admitted, he will select a member of the faculty in veterinary medicine to serve as chairman of his Special Committee. The faculty of the Division will then select two other members of the Committee. These three individuals will have charge of the candidate's program and will be responsible to the faculty of the Division for supervising his work. The candidate's work must fall in the following categories:

1. Advanced courses in any of the sciences which have a relation to medicine. Selected courses which are part of the regular curriculum of the Cornell University Medical College may be accepted for not more than half the total credit in this category. In no case shall credit be granted for courses which are part of the regular curriculum in veterinary medicine or for similar courses in the Medical College curriculum.

2. Regular attendance and study in any of the clinics of the Veterinary College or of the Medical College.

All candidates must take at least two thirds of their work in courses that may properly be included under Category 1. If desired, they may take all of their work in Category 2. Not more than one third of their work may be taken in Category 2.

Courses shall be deemed to have been satisfactorily completed only upon receipt of a regular transcript of credits. Following completion of his course work, each candidate for this degree shall present an acceptable monograph or thesis in the area of his special interest and shall submit to a general examination covering the subject matter of his work. The Special Committee shall set the time and place of his examination and invite all members of the Division and all members of the Graduate faculty of other fields who have participated in his training to attend. They shall have the right to examine the candidate and to express to the Special Committee their opinions of the candidate's competence, but the Special Committee alone shall be responsible for recommending him for the degree. The recommendation shall be addressed to the faculty of the Division of Veterinary Medicine of the Graduate School, which then shall make recommendations to the Graduate School.

Seminars

The several departments of the College hold seminars or special conferences for their advanced and graduate students. The seminar hears reports of the results of investigations and the progress of knowledge in its particular field, discusses methods of advanced and independent work such as are expected of those who are preparing theses or prosecuting any special investigation, and hears the reports of the students on the progress of their work. By means of the seminar the student incidentally gains facility in public speaking and fits himself to take a creditable part in the meetings of veterinary or human medical societies.

COMBINED COURSES

Students who do their preveterinary work in the College of Agriculture at Cornell, may, by judicious early planning, be able to qualify for both B.S. and D.V.M. degrees in less time than would be required if the courses were taken consecutively. This can be done by double registration during the latter part of the period whereby certain course credits in the veterinary curriculum can be applied toward completing the requirements for the Bachelor's degree.

In these instances three years are ordinarily spent as a candidate for the baccalaureate degree before the application for veterinary medicine is filed. It should be clearly understood that no assurance can be given in the beginning that candidates will be permitted to complete this plan, since decision on admission to the veterinary course cannot be given until the admission requirements of the Veterinary College have been completed.

REGISTRATION

Every student is required to register with the Registrar of the University at the beginning of each term (see the Academic Calendar for the day of registration). After completing that registration, he must register on the same day with the Director of Student Administration of the Veterinary College. After being admitted to the University no student is allowed to register after the close of the regular registration day except by special permission from the Director.

FOREIGN STUDENTS

The University maintains an International Student Office, and foreign students are invited to write to that office for any information they may need, or to consult the staff about any problems they may have. It is suggested that foreign students report to the International Student Office, 142 Day Hall, when they arrive at Cornell.

EXPENSES

TUITION

FOR STUDENTS not residents of the State of New York the tuition in the Veterinary College is \$300 a term, payable at the beginning of each term as printed on the registration cards. Tuition is \$200 a term to residents of the State of New York.

For purposes of computing scholar incentive awards, and waiver of tuition, the resident tuition for undergraduates is set at \$400 each year, and the balance is considered fees. For nonresident undergraduates, the tuition is \$600 each year, and the balance is fees.

COLLEGE AND UNIVERSITY GENERAL FEE

For certain services and privileges the University charges students who are not residents of New York State a College and University General Fee of \$187.50 each term over and above tuition. For students who are residents of New York State, this fee is \$87.50 each term over and above tuition.

This General Fee is paid by all students in the divisions at Ithaca, the amount varying in the different schools and colleges. It contributes toward the services supplied by the libraries, the Clinic and Infirmary, and the student union in Willard Straight Hall, pays a portion of the extra costs of laboratory courses and general administration, and supports programs of physical recreation and student activities.

Tuition and other fees become due when the student registers. The University allows ten days of grace from the first registration day of each term. The last day of grace is printed on the registration card which the student is required to present at the Treasurer's Office. Any student who fails to pay his tuition charges, fees, or other indebtedness to the University, or who, if entitled to free tuition, fails to claim it at the Treasurer's Office and to pay his other fees and indebtedness within the prescribed period of grace, is dropped from the University unless the Treasurer has granted him an extension of time to complete payment. For such extension the student is assessed a fee of \$5. A fee of \$10 is charged for late payment when no extension has been granted. For further information, consult the *Announcement of General Information* (obtained by writing to Cornell University Announcements, Day Hall).

Tuition or other fees may be changed by the Board of Trustees at any time without previous notice.

CHARGES FOR MINOR DELINQUENCIES

Every student is held personally responsible for any injury done by him to any of the University's property.

Assessments, charged to the student's account and payable at the Treasurer's Office, are levied in certain circumstances, under the following rules of the University:

A matriculated student desiring to register after the close of registration day shall first pay a fee of \$10 and present a letter of permission from the Director of Student Administration.

A student desiring to file his registration of studies after the date set by his college for filing shall first pay a fee of \$10.

A student desiring to take an examination or other test for the removal of a term condition (including the making up of a mark of "absent" or "incomplete") shall first pay a fee of \$2 for each examination or other test.

A student desiring to make an appointment for the required medical examination or conference after twenty days from the last registration day of the term shall pay a fee of \$2.

For reasons satisfactory to the proper authority any of the above mentioned assessments may be waived in any individual case if the student's failure to comply with the regulation was due to ill health or to other reasons beyond his control. Application for such a waiver should be made to the Director of Student Administration.

LIVING COSTS

Living costs cannot be stated with the same degree of certainty as regular University charges, since they depend to a great extent upon the individual's standard of living. Men students spend from \$135 to \$195 a term for room and from \$275 to \$325 a term for board. Laundry, done in Ithaca, may require \$25 to \$40 a term. For undergraduate women, the fixed charge for board and room in the dormitories is \$542.50 a term.

Books, instruments, and supplies will cost \$30 to \$50 a term.

Additional allowance must be made for clothing, travel, and incidentals.

FINANCIAL AIDS

SCHOLAR INCENTIVE PROGRAM

Applications should be filed before July 1 for each academic year but will be accepted up to December 1. Applications for the spring semester only have an April 1 deadline. *Annual* application is required.

UNDERGRADUATE SCHOLARSHIPS

Needy students who have done well scholastically may receive help from various scholarship funds. Discretion over the amount of money granted is vested in committees of the University, who evaluate the merits of the applicants. Students interested in financial aid should inquire at the Office of Scholarships and Financial Aid, Day Hall. There are many scholarships and grants-in-aid open to all University undergraduates, as well as several which are specifically for veterinary students. The latter, many of which are prizes, are described in the following pages.

Tuition Scholarships

The trustees have authorized a limited number of scholarships, each of an annual value of \$600, the amount of the annual tuition, to be awarded each year by the Veterinary College. The scholarships are awarded to undergraduate students who show promise of becoming outstanding veterinarians in the judgment of the faculty and who are not residents of New York State. Each student holding a scholarship must maintain a standing satisfactory to the faculty.

Valentine Mott Knapp Scholarship

This annual scholarship of the value of \$575 was established through the will of David V. Knapp as a memorial to his brother, Dr. Valentine Mott Knapp, '04. By action of the faculty, the award is to be made each year to a qualified applicant at the completion of his third year's work. Students who wish to be considered for this scholarship should make application to the Director of Student Administration not later than March 1. In awarding the scholarship, the faculty will take into consideration the ability of the applicant to do creditable academic work, the personal characteristics of the applicant with respect to professional attitude, and his financial need.

Yonkers Raceway Foundation Scholarship

By action of the executive committee of the Yonkers Raceway Foundation, an endowed scholarship of \$200 was established at the Veterinary College to be awarded by the Committee on Scholarships of the College to a needy student who is a resident of New York State. Students who wish to be considered for this scholarship should make application to the Director of Student Administration not later than March 1. The same criteria will be used in awarding this scholarship as are used in selecting the candidates for the Valentine Mott Knapp scholarship.

A.S.P.C.A. Scholarship

This scholarship of \$300 is offered annually by the American Society for the Prevention of Cruelty to Animals. It is paid from funds raised by Gordon Wright, owner of Secor Farms, from benefit horse shows held at his stables in White Plains, New York.

The scholarship is awarded in the spring term to a member of the third-year class for use during his fourth and final year. The recipient is chosen by the Veterinary College faculty on the basis of need, scholarship, demonstrated interest in horses, and general competence. It is open to students (a) who are particularly interested in equine practice, (b) who are residents of New York, and (c) who expect to practice in New York State after graduation. This scholarship will expire in 1964-1965.

Eastern Milk Producers Cooperative Scholarship

This scholarship of \$500 was established in February, 1961, and was awarded for the first time in the 1961-1962 academic year. The purpose is to assist a worthy student in the Veterinary College with preference to be given to sons or daughters of members of Eastern Milk Producers Cooperative Association. In order to qualify, a student must rank in the upper two-fifths of his class in college. He must have an established need for financial assistance and show evidence of outstanding character and leadership ability.

David Kennedy Johnston Scholarships

Under the will of Nettie J. Huey, funds were set aside to provide scholarships from time to time to students in the College of Agriculture or to students in the Veterinary College. Four scholarships of \$450 each are available.

LOAN FUNDS

Sources of support available for loans to Veterinary College students are as follows: the Cornell Veterinary Alumni Association; the New York

State Veterinary Medical Society; the family of David E. Wright '12; the Dean W. A. Hagan Fund; the Munderback Veterinary Fund; the Sunder-ville Veterinary Fund; and the Charles H. Webster Veterinary Fund. Veterinary students are also eligible to apply for loans from other funds held by the University. All of these are administered through the Office of Scholarships and Financial Aid. Students who are in real need should not hesitate to apply for assistance. It is suggested that students discuss their needs with the Director of Student Administration before applying.

PRIZES

Cornell University has been given a considerable number of funds for the endowment of prizes to be awarded annually to enrolled students. Some of these prizes are open to competition by students of the University generally. The University publishes a list of them under the title *Prize Competitions*. Copies will be mailed on request addressed to Cornell University Announcements, or they may be obtained at the Visitor Center, Day Hall. Prizes open to competition only by students of the Veterinary College are as follows:

THE BORDEN VETERINARY SCHOLARSHIP AWARD was established by the Borden Company Foundation, Inc., in 1945. It consists of an annual award of \$300 to be made to the member of the fourth-year class in veterinary medicine who attained the highest scholastic record in all veterinary studies prior to the final year. The award will be paid to the recipient during the fall term of the final year. In the event that the Dean finds it inappropriate to make the award in any one year, the award may be deferred, but only one award shall be made in any succeeding year.

THE HORACE K. WHITE PRIZES, established by Horace K. White of Syracuse, are awarded annually to meritorious students in the graduating class of the College. They consist of a prize of \$100 to the first in merit and a prize of \$50 to the second in merit.

THE GRANT SHERMAN HOPKINS PRIZE of \$55 in veterinary anatomy was endowed by Mrs. Ann Ottaway Hopkins in 1955 in memory of her husband. Dr. Hopkins served Cornell University for forty-five years (1889 to 1934). Upon the opening of the Veterinary College in 1896, he became a member of the original faculty as Assistant Professor of Veterinary Anatomy and Anatomical Methods. He was made a full professor in 1903 and served in that capacity until his retirement in 1934.

The prize will be awarded by the Veterinary College faculty upon the recommendation of the staff of the Department of Veterinary Anatomy. It will be awarded to a member of the graduating class on the basis of interest, ability, perseverance and performance in the work in veterinary anatomy. Special consideration will be given to extracurricular work in

animal morphology. Although scholarship is an important consideration, the award is not based wholly on that.

THE JANE MILLER PRIZE of \$55 in physiology is awarded to the student or students doing the best work in this subject. The prize is usually divided into a first prize of \$35 and a second prize of \$20 and is awarded at the end of the second year.

THE JAMES GORDON BENNETT PRIZE of \$70 is awarded to members of the graduating class. The award is based upon the work in the clinics giving evidence of the ability of the recipient to handle diseased animals humanely. Special emphasis is laid upon the ability of the student to apply effectively local and general anesthesia.

THE ANNE BESSE PRIZE of \$55 is awarded in the principles and practice of veterinary medicine. This award is based upon the work in the clinics giving evidence of ability in clinical diagnosis.

THE CHARLES GROSS BONDY PRIZES . . . Two annual prizes are awarded to the two fourth-year students who rank highest in proficiency in the courses in practical medicine and surgery of small animals. The first prize is \$35, and the second prize is \$20.

THE MARY LOUISE MOORE PRIZE IN BACTERIOLOGY was established by a bequest of Dr. Veranus A. Moore in honor of his wife. Dr. Moore was a member of the original faculty of the Veterinary College. He was Professor of Pathology, Bacteriology, and Meat Inspection from 1896 to 1926, and Dean of the Veterinary College from 1907 to 1920.

The income of the endowment (\$55) may be awarded each year, upon recommendation of the head of the Department of Pathology and Bacteriology and with the approval of the Dean of the College, either as a prize to students who have done the best work in the department or as a subsidy to encourage individual research work of students by defraying expenses of their experiments.

THE POULTRY DISEASE PRIZE was established by Dr. Nathan Wernicoff, '31, and Dr. Tevis Goldhaft, '35, of Vineland, N.J., for the purpose of stimulating interest in diseases of poultry. The prize consists of \$50 for the best composition or essay, or the best original work reported, by a member of the fourth-year class. Competing papers must be submitted not later than the first week of the second term of the college year to the Dean, who will appoint a suitable committee to read them and make recommendations on the award. The award will not be made if, in the judgment of the committee, none of the papers submitted are considered to be sufficiently meritorious.

THE ALPHA PSI PRIZE is given by Beta (Cornell) Chapter of the Alpha Psi Fraternity. It was suggested by the donors that this prize be "awarded

by the faculty to a member of the fourth-year class who has shown by his scholarship, personality, character, and breadth of interest that he is capable of elevating the prestige and expanding the services of veterinary science in practice, in education, and in its relationship to community, state, and national welfare."

NEW YORK STATE VETERINARY MEDICAL SOCIETY PRIZES, established by the New York State Veterinary Medical Society, consist of three cash awards of the value of \$25, \$15, and \$10, respectively. They are awarded to members of the fourth-year class who present and have approved the best case reports. The award extends from April 1 to March 31. All case reports to be considered must be received at the office of the Chairman of the Committee of Clinical Conferences, Course 202, by March 31. Each case report must be reviewed and approved by the head of the department in which the case was received, studied, and treated, or by a person in the department designated by him. The Executive Board of the New York State Veterinary Medical Society reserves the privilege of requesting any prize recipient to furnish either a copy of his paper or an abstract for publication in the organ of the society, *Veterinary News*.

THE WOMEN'S AUXILIARY A.V.M.A. PRIZE of \$50 is awarded annually to a senior student for a special contribution which advances the standing of the Veterinary College on the campus.



The Veterinary College Library.

THE JACOB TRAUM STUDENT AWARD was established by friends and colleagues at the time of Dr. Traum's retirement as Chief Scientist of the U.S. Department of Agriculture Plum Island Animal Disease Laboratory. Dr. Traum was graduated from Cornell University in 1905 and served the veterinary profession in a variety of capacities, particularly in the U.S.D.A. and at the University of California. The award will be given annually to the senior student in the New York State Veterinary College who is adjudged, by means considered appropriate by the Dean, as having exhibited in his scholastic career superior interest and accomplishments in bacteriology, epizootiology, pathology, and virology, including aptitude for and expressed interest in research on infectious diseases.

HEALTH SERVICES AND MEDICAL CARE

HEALTH services and medical care for students are centered in two Cornell facilities: the Gannett Medical Clinic (out-patient department) and the Sage Hospital. Students are entitled to unlimited visits at the Clinic. Appointments with individual doctors at the Clinic may be made, if desired, by calling or coming in person. (An acutely ill student will be seen promptly whether he has an appointment or not.) Students are also entitled to laboratory and X-ray examinations indicated for diagnosis and treatment; hospitalization in the Sage Hospital with medical care for a maximum of fourteen days each term and emergency surgical care. The cost of these services is covered in the College and University General Fee.

On a voluntary basis, insurance is available to supplement the services provided by the College and University General Fee. For further details, including charges for special services, see the *Announcement of General Information*.

If, in the opinion of the University authorities, the student's health makes it unwise for him to remain in the University, he may be required to withdraw.

HOUSING FOR STUDENTS

UNDERGRADUATE MEN

Cornell University provides attractive, quiet dormitory facilities for approximately 2000 men. These dormitories are a five-minute walk from the center of the campus and are situated on a fifteen-acre plot to the

west of the main campus and overlooking Cayuga Lake to the north, the valley to the south. The area is bounded by West, University, and Stewart Avenues, and Campus Road. The dormitories in this area are divided into two main groupings, the Baker Group and University Halls.

THE BAKER GROUP, comprised of Baker Tower, Founders Hall, North Baker Hall, South Baker Hall, Mennen Hall, Lyon Hall, and McFaddin Hall, is of fireproof construction, English collegiate in design, and affords accommodations for approximately 650 men.

UNIVERSITY HALLS, comprised of Units 1, 2, 3, 4, 5, and 6, were opened in 1954 and accommodate 1350 men. They are of modern fireproof construction and offer excellent study, social, and recreational facilities.

Students not assigned to dormitories under direct supervision of the University secure quarters in fraternity houses (for members only), rooming houses, cooperative houses, and private homes.

Application forms for University dormitories will be mailed automatically by the Office of Admissions to each male candidate for admission as a freshman or to a transfer student at the time of notification of provisional acceptance to the University. Housing in University dormitories can be guaranteed for entering freshman students who have been admitted to the University and have filed dormitory applications by June 1.

Cornell men are at liberty to dine wherever they choose; but within its varied food service program, Cornell offers a special dining arrangement for its student men. This meal plan, which is entirely optional in every way and available to any Cornell man, incorporates many desirable features. It provides for the prepayment of dining fees on a semester basis, and it affords worthwhile savings in food costs. The plan offers a selection of dining rooms: Willard Straight Hall, the student union building; Baker Cafeteria in University Hall, Unit I; the Noyes Lodge on Beebe Lake; the Martha Van Rensselaer Cafeteria; and the Dairy Bar Cafeteria in Stocking Hall. Devised to meet students needs, this dining arrangement encourages good eating habits in comfortable, attractive surroundings; it is designed for economy and convenience and allows for a wide menu selection and a liberal mealtime schedule.

UNDERGRADUATE WOMEN

Cornell University provides comfortable, well furnished dormitories and dining rooms for undergraduate women attending the University. Undergraduate women are required to live in University-operated dormitories or sororities (for members only) unless, because of exceptional circumstances, other arrangements are approved by the Office of the Dean of Students.

An application form for living accommodations for undergraduate women will be sent to each candidate by the Office of Admissions with the notice of provisional acceptance to the University.

GRADUATE STUDENTS

Sage Hall, the graduate center, provides dormitory housing for approximately 200 men and women. Situated in the center of the campus it is convenient to all colleges. There is a cafeteria in the building.

MARRIED STUDENTS

Cornell University rents unfurnished apartments for 400 married students and their families in the Cornell Quarters with 84 apartments, Pleasant Grove with 96 apartments, and Hasbrouck Heights with 246 apartments.

Detailed information on all types of housing, including off-campus housing for men and married students, may be obtained by writing the Department of Housing and Dining Services, Day Hall.

THE CONDUCT OF STUDENTS

AT ALL times and in all relationships a Cornell student is expected to conduct himself in a decent and respectable manner and in accordance with the obligation recognized by the student body of unfailing respect for the integrity of the individual and the best interests of the community.

The standards of conduct expected of a Cornell student are defined by the Student Government code and implemented by student judiciary boards granted initial jurisdiction for student conduct by the Faculty Committee on Student Conduct. A student may at any time be removed from the University if, in the opinion of the Committee, such action is in the University's best interests.

In the Veterinary College a Student Honor Code was established in recognition of the importance of ethics, honor, and personal integrity in the individuals training for the veterinary profession. The Code places the responsibility for ethical conduct upon the students rather than the faculty. A copy of the Honor Code is given to each student at the time of registration, and it is the student's duty to familiarize himself with the contents of the Code.

A Veterinary Faculty Committee on Student Conduct is available to veterinary students for consultation and guidance and in rare instances for referral of disciplinary cases beyond the jurisdiction of the Student Honor Code.

REQUIREMENTS FOR GRADUATION

THE PRESCRIBED four-year curriculum leading to the degree of Doctor of Veterinary Medicine (D.V.M.) is summarized in the section below. To receive this degree candidates must satisfy all the entrance requirements (pages 12-16), must successfully pursue the courses named in the curriculum below, must have paid all fees due, and must have spent at least one year in residence.

The work of the College is arranged to begin late in September and to close in June. The academic year is divided into two terms.

At the conclusion of each term the Veterinary College faculty will review the records and conduct of students. Unsatisfactory students will be dropped from the College.

THE CURRICULUM

In the following summary of the curriculum, the figure in the first column after the name of the course is the number of the course and refers to a description on one of the following pages: 32-45. The figures in the second and third columns indicate the hours of credit given for the successful pursuit of the several courses in either term. The abbreviation "Req." indicates that a course, or its equivalent, is required for graduation but that no formal credit is given for the course. A student is required to carry the number of credit hours scheduled for each term of study. If he has advanced credit for a course or courses, suitable elective subjects of approximately equivalent credit shall be substituted with the approval of the student's advisor.

FIRST YEAR

	<i>Course number</i>	<i>Credit</i>	
		<i>Fall term</i>	<i>Spring term</i>
Anatomy	1	7	—
Anatomy	2	—	6
Neuroanatomy	5	—	1
Developmental Anatomy and Histology.....	7	4	—
Microscopic Anatomy	8	—	5
Animal Husbandry	1	3	—
Physiological Chemistry	11	6	—
Animal Genetics	124	—	3
Animal Husbandry	11	—	3
Physiology	12	—	3
Total		20	21

REQUIREMENTS FOR GRADUATION 31

SECOND YEAR

	Course number	Credit	
		Fall term	Spring term
Applied Radiation Biology.....	101	1	—
Physiology	12	3	—
Physiology	13	—	3
Experimental Physiology	14	3	—
Bacteriology and Immunology.....	43	4	—
Bacteriology and Immunology Laboratory.....	43a	5	—
General Pathology	40	2	—
General Pathology Laboratory.....	40a	2	—
Special Pathology	41	—	2
Special Pathology Laboratory.....	41a	—	3
Animal Parasitology	62	—	2
Pharmacology	15	—	6
Food Quality Control.....	48	—	3
Roentgenology	37	—	1
Total		20	20

THIRD YEAR

Food Quality Control.....	48	2	—
General Surgery	30	4	—
Surgical Exercises	31	1	—
Infectious Diseases	42	—	3
Diseases of Large Animals.....	50	5	2
Small Animal Medicine.....	21	2	3
Small Animal Surgery.....	22	—	3
Applied Anatomy	3	1	—
Applied Anatomy	4	—	1
Surgical Exercises	23	—	1
Obstetrics	51	5	—
Special Surgery	32	—	5
Diseases of Poultry.....	46	—	3
Applied Parasitology	63	2	1
Clinical Orientation	201	Req.	Req.
Total		22	22

FOURTH YEAR

Diseases of Large Animals.....	52	5	4
Jurisprudence, Ethics, and Business Methods..	33	—	1
Clinical Conferences	202	Req.	Req.
Clinics:*			
Small Animal	203	4	4
Large Animal	204	4	4
Ambulatory	205	4	4
Ancillary	206	4	4

* Clinics will be held all day, Monday through Friday, beginning at 9 a.m., and on Saturday until 1 p.m.

DESCRIPTION OF COURSES

IN THE following pages a list of the teaching departments of the College is given. Under each department heading, brief descriptions of the courses offered will be found. Most of these courses are a part of the veterinary curriculum; a few are elective to veterinary students or are given primarily for graduate students or students of other colleges of the University.

The clinics are operated by several departments. A brief statement about the particular clinical work of each department concerned will be found in the general description of the activities of that department. A general statement of the operation of the clinics, with courses and numbers, is given under a special heading, following the departmental descriptions.

Finally, there is a listing of courses given by other colleges as a part of the veterinary curriculum.

ANATOMY

Professors R. E. HABEL, H. E. EVANS; Assistant Professors A. W. STINSON, A. DE LAHUNTA; Assistants J. F. CUMMINGS, J. L. SCANLAN.

1. *GROSS ANATOMY*. First year, fall term. Credit seven hours. Lecture, M 9. Conference, W 9. Laboratory, M 10-1, T 10-1, Th 10-1, F 11-1, S 9-12. Professor EVANS; Assistant Professor DE LAHUNTA; Assistants CUMMINGS, SCANLAN. Prerequisite, course work equivalent to that required for admission to the Veterinary College. A limited number of nonveterinary students will be admitted by permission.

The structure of a typical mammal is studied by detailed systematic and regional dissection of the dog. The basic features of avian anatomy are studied by a dissection of the chicken. The lectures, supplemented by demonstrations, consider the comparative and regional gross aspects of vertebrate organ systems, anatomical terminology, literature, and techniques, and the specific morphology of the dog.

Each student is required to make a deposit of \$20 for a disarticulated dog skeleton.

2. *GROSS ANATOMY*. First year, spring term. Credit six hours. Lecture, F 9. Laboratory, M 2-4:30, T 10-12:30, Th 2-4:30, F 10-12:30, S 9-11:30. Professor HABEL; Assistant Professor DE LAHUNTA; Assistants CUMMINGS, SCANLAN. Prerequisite, Anatomy 1 or Zoology 321-322.

Regional anatomy of the horse, cow, sheep, and swine.

3. *APPLIED ANATOMY*. Third year, fall term. Credit one hour. Laboratory, T 10-12:30 or Th 10-12:30 or S 10-12:30. Professor HABEL.

An opportunity for practice in the recognition of those anatomical features which are essential to diagnostic, surgical, obstetrical, and postmortem procedures. The approach is topographical, comparative, and clinical. The emphasis is upon the study of living animals, supplemented by dissections, serial transections, models, and radiographs.

4. *APPLIED ANATOMY*. Third year, spring term. Credit one hour. Laboratory, T 2-4:30 or Th 2-4:30. Professor HABEL.

Anatomy 4 is a continuation of Anatomy 3.

5. *NEUROANATOMY*. First year, spring term. Credit one hour. Laboratory, F 2-4:30. Assistant Professor DE LAHUNTA, Assistant CUMMINGS.

A morphological and functional study of the central nervous system of the domestic animals.

6. *ADVANCED ANATOMY*. Fall and spring terms. Professors HABEL and EVANS; Assistant Professors STINSON and DE LAHUNTA. Prerequisites, Courses 1, 2, 7, and 8 or similar preparation in comparative anatomy and histology. Hours and credits to be arranged.

An opportunity for advanced study under personal direction.

7. *DEVELOPMENTAL ANATOMY AND HISTOLOGY*. First year, fall term. Credit four hours. Lectures, T Th 9. Laboratory, W F 2-4:30. Assistant Professors STINSON, DE LAHUNTA; Assistant SCANLAN. Prerequisites, courses work equivalent to that required for admission to the Veterinary College, plus completion of or concurrent registration in Veterinary Anatomy 1 or 9, or Zoology 321. A limited number of nonveterinary students will be admitted by permission of the instructor.

The study of development is designed to provide a foundation for the understanding of definitive anatomy, the genetic and functional relationships of the tissues, and reproductive physiology. Students are provided with serial sections of the chick and pig for laboratory use. The biology of the cells and tissues is illustrated with material taken from the domestic animals.

8. *MICROSCOPIC ANATOMY*. First year, spring term. Credit five hours. Lectures, M W 9. Laboratory, M W Th 10-12:30. Assistant Professor STINSON; Assistant SCANLAN. Prerequisites, Veterinary Anatomy 7, plus completion of or concurrent registration in Veterinary Anatomy 2 or 9, or Zoology 322. A limited number of nonveterinary students will be admitted by permission of the instructor.

The microscopic structure of the organs and the morphologic evidence of their function are described and illustrated with preparations from the domestic animals. In the lectures, the relationship of normal morphology to veterinary physiology and pathology is emphasized.

9. *VERTEBRATE MORPHOLOGY*. Fall term. Credit three hours. Lecture, W 1-2. Laboratory, W F 2-4:30. Professor EVANS. Prerequisite, zoology or biology.

Designed primarily for graduate students in animal husbandry, nutrition, conservation, and zoology, although undergraduates may register by permission. Laboratory assignments include the dissection of the dog, cow, and chicken.

Facilities are available to embalm and dissect other species if desired. Lectures and demonstrations on the phylogeny, structure, and function of vertebrate organ systems supplement the laboratory work.

PHYSIOLOGY

Professor A. F. SELLERS; Associate Professors L. L. NANGERONI, E. N. BERGMAN (on leave), C. E. STEVENS, R. H. DUNLOP; Assistant Professor J. F. WOOTTON; Acting Associate Professor J. V. EVANS; Research Associate J. HANSON; Assistants F. A. AHRENS, J. A. HIMES, W. E. ROE, H. L. TRENHOLM; Teaching Associate W. FUERST; Visiting Fellows: C. S. GIATTAS, V. C. ESGUERRA.

The following fields of activity are covered in the work of the department: physiological chemistry, animal physiology, and pharmacology. The department is well equipped for work in these fields.

10. *ANIMAL PHYSIOLOGY*. Spring term. Credit three hours. M W F 10. Associate Professor NANGERONI. Prerequisites, one year of biology or zoology and college courses in chemistry.

Lectures and demonstrations arranged especially for students of agriculture but open to others.

11. *PHYSIOLOGICAL CHEMISTRY*. First year, fall term. Credit six hours. Lectures and recitations, M 8, W 8, F 9. Laboratory, M T Th 2-4:30. Assistant Professor WOOTTON and assistants. Prerequisites, 12 semester hours of inorganic and organic chemistry.

Includes also the elements of biophysical chemistry. A part of the course is devoted to a study of the normal chemical constituents of the blood and urine and the quantitative determination of such as have been found most important in physiological and clinical studies.

12. *PHYSIOLOGY*. Second year, fall term, and first year, spring term (1963-1964 only). Credit three hours. Professor SELLERS; Associate Professors EVANS and STEVENS. Prerequisites, Physiology 11, Anatomy 1 and 2, or Anatomy 9 or Zoology 211-212 and Biochemistry 102.

Lectures and demonstrations on blood and lymph, circulation, respiration, digestion, and absorption.

13. *PHYSIOLOGY*. Second year, spring term, and second year, fall term (1963-1964 only). Credit three hours. T W Th 8. Professor SELLERS; Associate Professors EVANS and NANGERONI. Prerequisite, Physiology 12.

Lectures and demonstrations on the muscular and nervous systems. Special senses, excretion, metabolism, temperature regulation, endocrine organs, and reproduction.

14. *EXPERIMENTAL PHYSIOLOGY FOR VETERINARY STUDENTS*. Second year, fall term. Credit three hours. Laboratory, T and Th 9-12:30. Associate Professor NANGERONI and assistants. Prerequisites, same as for Physiology 12. (Graduate students register for Course 20.)

15. *PHARMACOLOGY*. Second year, spring term. Credit six hours. Lectures, M W F 9. Laboratory, M 10-4. Conference, S 8. Associate Professor DUNLOP and assistants. Prerequisites, Anatomy 1, 2, 5, 7, 8; Physiology 11, 12, 13, 14; Pathology 40, 40a.

17. *SPECIAL PROBLEMS IN CHEMICAL PHYSIOLOGY*. Both terms. Hours and credit to be arranged. Registration by permission.

Laboratory work, conferences, collateral reading, and reports, adapted to the needs of students.

18. *RESEARCH*. Both terms. Hours to be arranged. For graduates only.

20. *EXPERIMENTAL PHYSIOLOGY FOR GRADUATE STUDENTS*. Spring term. Credit 3 hours. Alternate years. (Not offered in 1964). Laboratory, W F 1-4. Associate Professor NANGERONI. Prerequisites as for Physiology 12, co-registration in Physiology 12. Registration limited. Consent of instructor required.

PHYSICAL BIOLOGY

Professors C. L. COMAR (on sabbatic leave), E. L. GASTEIGER, JR., R. H. WASSERMAN (Acting Head); Associate Professor F. W. LENGEMANN; Visiting Associate Professor H. BRUST-CARMONA; Assistant Professors A. P. CASARETT, D. N. TAPPER; Research Associates R. ALEXANDER, J. R. GEORGI, R. Z. KORMAN, C. K. PAREKH, A. N. TAYLOR, J. C. THOMPSON, JR., R. A. WENTWORTH; Assistants J. B. ANDERSON, A. L. BROOKS, J. G. EBEL, R. K. HERZOG, F. L. HILTZ, F. A. KALLFELZ, H. LEVITAN, R. A. MENZIES; Special Lecturer N. TAPPER.

The department is well equipped for advanced work in the applications of radiation and physical methods to problems of animal and biological research.

100. *RADIOISOTOPES IN BIOLOGICAL RESEARCH—PRINCIPLES AND PRACTICE*. Spring term. Credit four hours. Lectures, T Th 11. Laboratory, M T or W 1:30-5. Prerequisites, a course in quantitative chemistry and permission of instructor. Professor WASSERMAN and staff.

Lectures, demonstrations, and laboratory on the fundamentals of atomic energy procedures and applications to biological research.

101. *APPLIED RADIATION BIOLOGY*. Second year, fall term. Credit one hour. W 9-10. J. R. GEORGI.

Lectures and demonstrations on the nature of radiation, biological effects, veterinary applications, and monitoring procedures.

104. *BIOLOGICAL EFFECTS OF RADIATION*. Spring term. Credit two hours. Lectures, T Th 10. Asst. Professor CASARETT.

Lectures and demonstrations on radiation physics, radiation chemistry, radiation effects at the cellular level, radiation effects in multicellular organisms, genetic effects of radiation, radioprotective and radiomimetic substances.

107. *SEMINAR—SPECIAL TOPICS IN PHYSICAL AND RADIATION BIOLOGY*. Credit one hour. Fall term. Registration by permission.

108. *BIOLOGICAL MEMBRANES AND NUTRIENT TRANSFER*. Spring term. Credit two hours. Lectures (times to be designated). Prerequisites, animal or plant physiology, quantitative and organic chemistry, physics, and consent of instructor. Cellular physiology and elementary physical chemistry desirable. Professor WASSERMAN.

Lectures and demonstrations on biophysical properties of biological membranes, theoretical aspects or permeability and transport, and mechanism of

transfer of inorganic and organic substances across intestine, placenta, kidney, erythrocytes, bacteria, and other biological systems.

109. *FUNCTIONAL ORGANIZATION OF THE NERVOUS SYSTEM.* Fall term. Credit three hours for lecture, five hours for lecture and laboratory. M W F 10. Laboratory, W 1:00-5:00 bi-weekly. Prerequisites, physiology, organic chemistry, physics, and/or consent of instructor. Physical chemistry and neuro-anatomy desirable. Professor GASTEIGER.

The function of the nervous system will be considered primarily from an electrophysiological viewpoint. Where appropriate, important studies of reflexology, chemical and feedback control, and comparative anatomy will be utilized. Laboratory studies will include electrical activity of cells, reflexes, decerebrate rigidity, acoustic microphonic response, subcortical stimulation, evoked and spontaneous cortical activity.

110. *QUANTITATIVE ASPECTS OF RADIATION AND PHYSICAL BIOLOGY.* Fall term. Credit two hours. Lectures, S 9:30-11:00. Enrollment limited. Special Lecturer N. TAPPER.

Methods of dealing with quantitative aspects of radiation and physical biology, including a review of fundamentals of mathematics, elementary statistics, and an introduction to calculus with emphasis on applications to problems in radiation phenomena and biological kinetics.

PATHOLOGY AND BACTERIOLOGY

Professors P. OLAFSON, G. C. POPPENSIEK, D. W. BAKER, J. A. BAKER, D. W. BRUNER, C. G. RICKARD, J. H. WHITLOCK, K. MCENTEE, J. H. GILLESPIE, J. BENTINCK-SMITH, B. E. SHEFFY; Associate Professors L. P. KROOK, K. M. LEE, A. J. WINTER; Assistant Professors N. L. NORCROSS, L. E. CARMICHAEL; Research Veterinarian W. C. WAGNER; Research Biologist H. O. DUNN; Research Oncologist J. E. POST; Research Associate J. A. ROBERTS; Laboratory Director T. F. BENSON; Teaching Associate G. C. TODD; Research Assistant R. F. KAHRs; Assistants D. L. BOKELMAN, A. BUCKNOR, S. G. CAMPBELL, M. T. A. FOUAD, C. L. GRIES, J. M. KEHOE, P. W. MELLICK, R. A. MENZIES, D. A. MORROW, R. G. THOMSON, H. VAN KRUININGEN, R. WILLOUGHBY, A. ZARKOWER.

The laboratories of the department are well equipped with modern apparatus providing opportunity for advanced work, for those students who are properly prepared, in pathological anatomy, autopsy work, pathogenic bacteriology, immunity, virology, and parasitology. The department operates one diagnostic laboratory for general diagnostic work, to which a great deal of pathological material and many blood samples for serological testing come from all parts of the state. In addition, a teaching laboratory of clinical pathology is operated to serve the clinics of the college.

These laboratories furnish an abundance of fresh materials for teaching work and for research in animal diseases. The clinics and the routine autopsies also furnish material.

The following courses are required in the curriculum of the Veterinary College and are given particularly for veterinary students. When there is room for them, properly prepared students of other colleges will be admitted, but permission to register must be obtained in each case.

40. *GENERAL PATHOLOGY LECTURES*. Second year, fall term. Credit two hours. M F 9. Professor RICKARD. Prerequisites, Anatomy 7 and 8 or equivalent. In addition, it is desirable that the student shall have had at least one year's work in anatomy and physiology. In special cases of students who are majoring in biology and expect to take no further work in pathology, these prerequisites may be waived in part. When this is done, the course will not be accepted as a prerequisite for other courses.

40a. *GENERAL PATHOLOGY LABORATORY*. Second year, fall term. Credit two hours. Section I, M 10-12:30, F 10-12:30. Section II, W-10-12:30, S 9-11:30. Professor RICKARD. Course 40 must be taken simultaneously or have been completed previously.

41. *SPECIAL PATHOLOGY LECTURES*. Second year, spring term. Credit two hours. T Th 9. Professor OLAFSON. Prerequisite, Course 40a.

41a. *SPECIAL PATHOLOGY LABORATORY*. Second year, spring term. Credit three hours. Section I, T W F 2-4:30, F 10-12:30. Section II, W F 10-12:30, T 2-4:30. Professor RICKARD. Course 41 must be taken simultaneously or have been completed previously. Work in hematology is included.

42. *INFECTIOUS DISEASES*. Third year, spring term. Credit three hours. M W F 10. Professor POPPENSIEK. Prerequisites, Courses 41 and 43.

43. *BACTERIOLOGY AND IMMUNOLOGY*. Second year, fall term. Credit four hours. M T W Th F 1:30. Professors BRUNER and J. A. BAKER. Includes general and pathologic microbiology, virology, and immunology.

43a. *BACTERIOLOGY AND IMMUNOLOGY LABORATORY*. Second year, fall term. Credit five hours. M T W Th F 2:30-5. Professors BRUNER and J. A. BAKER, and assistants. Open to students who have taken or are taking Course 43 or its equivalent.

48. *FOOD QUALITY CONTROL*. Second year, spring term. Credit three hours. M W 8, T 10-12:30. Third year, fall term. Credit two hours. F 11, 2-4:30. Dr. TODD and staff.

Veterinary inspection to control quality and wholesomeness of meat, meat food, dairy, fish, and poultry products and to study dairy farms and plants in which these products are produced, processed, manufactured, stored, etc. Certain parts of the course are given by members of the Departments of Poultry Husbandry, Dairy Industry, and Animal Husbandry of the College of Agriculture, and the Department of Medicine of the Veterinary College.

62. *ANIMAL PARASITOLOGY*. Second year, spring term. Credit two hours. Th 11, 2-4:30. Professor WHITLOCK. Prerequisites, zoology or biology.

A systematic study of the helminth and arthropod parasites of domestic animals with particular emphasis on the identification and bionomics of the forms of veterinary importance.

63. *APPLIED PARASITOLOGY*. Third year, fall term. Credit two hours. Lecture, M 10. Laboratory: Section I, T 10-12:30; Section II, Th 2-4:30; Section III, Th 10-12:30. Third year, spring term. Credit one hour. Section I, T 2-4:30; Section II, W 2-4:30. Professors BAKER and WHITLOCK. Open only to veterinary students. Prerequisite, Course 62.

An organized study of the parasitic diseases of domestic animals with particular emphasis on the features of diagnostic importance. Special attention will be given to the laboratory and post-mortem techniques that are of value in applied parasitology.

The following courses are not a part of the regular veterinary curriculum. Courses 61 and 170 are given especially for students in the College of Agriculture. Course 149 is given for those students who have had no work in pathological anatomy. The others are for graduate and advanced undergraduate students. Permission to register must be obtained by all students electing these courses.

61. *HEALTH AND DISEASES OF ANIMALS*. Spring term. Credit three hours. Lectures, M W F 11. Dr. WAGNER and collaborators. Not open to first-year students or to those who have had no course in animal husbandry. The causes and the nature of the common diseases of livestock are discussed. Emphasis is placed on the prevention and control of animal diseases.

64. *ADVANCED WORK IN ANIMAL PARASITOLOGY*. Fall and spring terms. Credit one to three hours, by arrangement. Professors BAKER and WHITLOCK. Prerequisite, Course 62. For advanced undergraduate and graduate students. Special problems concerned with the parasites of domestic animals.

149. *PATHOGENIC BACTERIOLOGY*. Spring term of odd years. Credit five hours. T Th 1:40-5 and S 10-12:30. Professor GILLESPIE. Includes microbiology, virology, and immunology.

150. *LABORATORY METHODS OF DIAGNOSIS*. Credit one to three hours. Hours by appointment. Dr. BENSON. Prerequisites, Courses 41a and 43a or 149.

Instructions and practice in the application of bacteriological, pathological, and serological methods for the diagnosis of disease.

151. *SEROLOGY*. Spring term of even years. Credit two hours. One hour, T 2-4:30, and one hour to be arranged. Professor BRUNER. Limited to eight students, with preference given to graduate students. Permission to register must be obtained before the end of the preceding (fall) term.

Includes complement fixation, agglutination complement absorption, hemagglutination inhibition, precipitation, neonatal isoerythrolysis, and the antigenic analysis of *Salmonella* cultures. Prerequisites, Courses 43 and 43a or 149.

152. *ADVANCED WORK IN PATHOLOGY, BACTERIOLOGY, VIROLOGY, OR IMMUNOLOGY*. Fall and spring terms. Credit one to three hours. Hours to be arranged. Professors OLAFSON, J. A. BAKER, BRUNER, RICKARD, MC-ENTEE, and KROOK.

Properly prepared students may undertake special problems or receive special assignments.

153. *HEMATOLOGY*. Spring term. Credit one hour. W 10-12:30 or 2-4:30. Professor RICKARD.

Morphological studies of blood, cerebrospinal fluid, transudates, exudates, and urine. Taken by veterinary students as part of Course 41a.

154. *SEMINAR*. Fall and spring terms. No credit. Required of all graduate students. Undergraduate students are admitted.



A student examines a cow for mastitis.

155. *PATHOLOGY OF NUTRITIONAL DISEASES*. Spring term. Credit three hours. Lecture and laboratory. Hours to be arranged. Associate Professor KROOK. Designed primarily for graduate students of nutrition. Prerequisites, 40 and 40a.

156. *IMMUNOCHEMISTRY*. Spring term. Credit three hours. Lecture and laboratory. Hours to be arranged. Assistant Professor NORCROSS. Lectures include quantitative aspects of the antigen-antibody reaction, physical and chemical properties of antibodies, mechanisms of hypersensitivity, and the purification of antigens. Laboratory experiments illustrate the phenomena covered in the lectures and familiarize the student with selected immunochemical techniques. Registration by permission.

157. *HISTORY OF VETERINARY MEDICINE*. Fall term. Credit two hours. W F 10. Professor D. W. BAKER.

158. *REPRODUCTIVE PATHOLOGY*. Fall term. Credit two hours. Lecture and laboratory. Hours to be arranged. Professor MCENTEE. Prerequisites, Courses 40, 40a, 41 and 41a.

AVIAN DISEASES

Professors P. P. LEVINE, J. FABRICANT, C. I. BOYER, JR., M. C. PECKHAM; Associate Professor B. W. CALNEK; Assistant R. L. WITTER.

The department maintains a poultry disease diagnostic clinic at the college and five regional diagnostic laboratories in different parts of the state. These laboratories supply fresh material for teaching and research purposes. Adequate facilities existing at the college and at the poultry disease research laboratory on Snyder Hill provide opportunities for advanced study for properly qualified students. A respiratory disease-free breeding flock and a poultry disease isolation building are available for studies on most of the infectious and other diseases of poultry.

46. *DISEASES OF POULTRY*. Third year, spring term. Credit three hours. T Th 10, F 2-4:30. Professor LEVINE.

Required of veterinary students. Diseases of domestic poultry and other birds are studied with special emphasis on differential diagnosis and control. Fresh and preserved specimens from the Poultry Diagnostic Clinic are presented during the laboratory period.

170. *POULTRY HYGIENE AND DISEASE*. Fall term, alternate years. (Given in 1961-1962.) Credit two hours. Lecture and laboratory, Th 1:40-4. Dr. WITTER. Prerequisites, Animal Physiology 10 or Human Physiology 303, and General Bacteriology 3.

An introductory course in poultry disease intended primarily for students in the College of Agriculture.

SMALL ANIMAL MEDICINE AND SURGERY

Professors E. P. LEONARD, R. W. KIRK; Assistant Professors A. M. BECK, G. E. ROSS, JR.; Medical Interns J. A. LORENZEN.

The instruction consists of lectures, recitations, and laboratory work. The small animal clinic furnishes abundant material for instruction in applied therapeutics of these animals, including the surgical as well as the medical. This clinic is run as any small animal practice. The students are assigned to the cases, assist in any operations, and under close supervision have charge of the patients.

21. *SMALL ANIMAL MEDICINE*. Third year, fall term. Credit two hours. W 10, S 9. Spring term. Credit three hours. Th 8, F S 9. Professor KIRK. Prerequisite. Special Pathology and Pharmacology.

22. *SMALL ANIMAL SURGERY*. Third year, spring term. Credit three hours. M T W 8. Professor LEONARD. Prerequisite, Special Pathology.

23. *SURGICAL EXERCISES*. Third year, spring term. Credit one hour. M T W or Th 2-4:30. Professor LEONARD, Assistant Professor ROSS.

24. *ADVANCED WORK*. Five or more hours a week throughout the term. Research in medicine and surgery of small animals. Professors LEONARD and KIRK.

MEDICINE AND OBSTETRICS

Professors M. G. FINCHER, S. J. ROBERTS, F. H. FOX; Assistant Professor R. B. HILLMAN; Field Veterinarians S. D. JOHNSON, L. E. FIELD; Supervising Veterinarian R. S. GUTHRIE; Medical Interns R. C. BARTHOLOMEW, M. F. MATHER.

The course in veterinary medicine, principles and practice, extends over the last two years of undergraduate study, the subjects of the second year being distinct from, and complementary to, those of the first. It includes the constitutional, dietetic, and toxic affections and the noninfectious maladies of the different systems of organs—digestive, respiratory, circulatory, urinary, cutaneous, and visual—of the various genera of domestic animals. It also includes a study of the clinical phases of infectious and parasitic diseases, the disturbances of metabolism and therapeutics of large animals.

Our proximity to a large agricultural college and to a well-stocked farming community tends to secure a greater variety of patients than can be had in a large city remote from country flocks and herds. Students take charge of a few unusual cases in the hospital and many routine cases in the ambulatory clinic. Complete daily records are prepared by the students on all of the most instructive cases. The course also includes instruction in diagnosis. Through the medium of laboratory work students are expected to acquire a methodical system of examination by repeated systematic observations on both normal and diseased animals. The work involves the use of various special diagnostic methods taught in our own and other laboratories of the College, such as examination of the blood, milk, urine, and feces, the application of sero-diagnostic methods, etc.

Ambulatory Clinic

An ambulatory or out-clinic is conducted for the purpose of giving instruction to students under conditions identical with those encountered in private practice. Proper conveyances and equipment are provided, and an opportunity is afforded for observing such diseased farm and dairy animals as cannot be entered in the clinics of the College. The student thereby not only has an opportunity to see cases not readily brought to the College clinic but also assists in handling cases in the same manner and under the same environment as are required of the country practitioner. As the vicinity of Ithaca is largely devoted to dairying, valuable clinical material relating to obstetrics and the diseases of dairy cows is available and is extensively used. In addition, the supervising veterinarian and two field veterinarians associated with the New York State Mastitis Program are resident in Ithaca, and senior students are required to accompany and assist them on many field trips dealing with all phases of bovine mastitis, including a study of various methods of milking and housing dairy cattle. In the senior year a field trip is made to study and observe management practices on large horse breeding farms, and this is a required part of Courses 50, 51, and 52.

50. DISEASES OF LARGE ANIMALS. Third year, fall and spring terms. Credit: fall term, five hours; spring term, two hours. Lectures or recitations covering physical diagnosis, ophthalmology, therapeutics, and some diseases of large animals. Fall term, M T W Th F 8; spring term, F S 8. Professor Fox.

51. OBSTETRICS AND DISEASES OF THE GENITAL ORGANS, INCLUDING STERILITY AND ABORTION. Third year, fall term. Credit five hours. Lectures, T Th F 9, S 8. Laboratory, M or W or Th 2-4:30. Professors ROBERTS, FINCHER (abattoir work); Assistant Professor HILLMAN. A general survey of the subject of obstetrics and a thorough consideration of the diseases of the genital organs including sterility, abortion, and other subjects related to pregnancy and parturition. Obstetrical exercises, pregnancy diagnosis, artificial insemination.

nation, and other clinical phases of the course are presented during the laboratory periods. Further clinical instruction in obstetrics and sterility is given in the ambulatory clinic and at a near-by abattoir in the third and fourth years.

52. DISEASES OF LARGE ANIMALS. Fourth year, fall and spring terms. Credit: fall term, five hours; spring term, four hours. Fall term, M T W Th F 8; spring term, M T W Th 8. Professors FINCHER, FOX; Assistant Professor HILLMAN.

Lectures and field trips concerning poisonous plants are given by Associate Professor Kingsbury of the Department of Botany.

Special Lectures

During the year, lectures on special topics in medicine will be given by eminent practitioners and teachers of veterinary medicine. These will form a part of the instruction in this department.

Opportunities for Research

The activities of the department, aside from the instruction work, are devoted to research in connection with diseases of cattle, including mastitis, the phenomena of sterility and abortion in animals of breeding age, and diseases of newborn calves. Opportunity is afforded for participation in the investigations by graduate students having acceptable preparation.

SURGERY

Professors D. D. DELAHANTY, A. G. DANKS; Associate Professor W. K. LOOMIS; Assistant Professor J. E. LOWE; Surgical Interne L. L. KRAMER; Assistant P. C. WING; Farrier E. W. LAYTON.

The instruction consists of classroom and laboratory work designed to afford training for practice.

Classroom Work

Course 30 in General Surgery, Course 40 in General Pathology, and Course 31 in Surgical Exercises together constitute a group designed to impart a general knowledge of the principles of surgery, surgical pathology, therapeutics, and operative technique.

Course 32, a total of seventy-five lectures and recitations, is devoted to the surgery of the various regions of the body and includes horseshoeing.

Laboratory Work

The laboratory work includes surgical exercises and general surgery. In the course in surgical exercises the student is required to perform most of the important operations on horses and cattle. The animal is placed under general anesthesia, which is maintained until the close of the period, when the subject is destroyed. The maintenance of chloroform anesthesia for three consecutive hours give the student valuable experience in the technique of general anesthesia, for which there is a constantly increasing demand. Emphasis is placed on asepsis

and antisepsis, arrest of hemorrhage, suturing, and dressing, so that, while acquiring skill and knowledge of the appearance, resistance, and general character of living tissue, the student also forms proper habits in surgical procedure.

In general surgery laboratory, most emphasis is placed upon the farm animals, but many basic principles may be adapted to all classes of animals. Subjects taught include restraint, various methods of administering medicines, suturing, bandaging, examination of teeth, examination of the feet, and complete examination for soundness.

Clinical Surgery of the Farm Animal

A hospital is maintained with facilities for the hospitalization of approximately 67 patients. There are two operating rooms equipped with operating tables, stocks, diagnostic and therapeutic X-ray equipment, and other conveniences. There is also a farriery with a farrier in attendance. Fourth-year students are in the clinics for the entire day, Monday through Friday, also on Saturday and Sunday morning. Two classes of patients are admitted: special patients and clinic patients. Special patients are examined, diagnosed, and treated by the senior staff members. The students assist and observe. Clinic patients are examined, diagnosed, and treated by the residents and students. In the hospital, the student has an opportunity to see, examine, and treat many unusual cases that are referred to the College by practitioners. Furthermore, the student has an opportunity to study the progress of cases, which is impossible when treating patients on the farm. The cooperation between the clinical staff and the laboratories provides the student an opportunity to study the patient critically and to correlate clinical findings with both the physiological and pathological. Every possible opportunity is given to the student to participate in the examination and treatment of patients because the student will learn more from doing than from observing.

30. *GENERAL SURGERY*. Third year, fall term. Credit four hours. M W 9, F 10; T Th or S 10-12:30. Professor DANKS and assistants. Prerequisites, third-year standing in the veterinary curriculum.

31. *SURGICAL EXERCISES*. Third year, fall term. Credit one hour, M W or Th 2-4:30. Dr. LOWE. Three hours a week of laboratory work in surgical operations upon anesthetized large animals.

32. *SPECIAL SURGERY*. Third year, spring term. Credit five hours. M T W Th 9, F 11. Professor DELAHANTY.

33. *JURISPRUDENCE, ETHICS, AND BUSINESS METHODS*. Fourth year, spring term. Credit one hour. F 8. Professor DANKS and associates. Lectures by a lawyer on the subjects of the expert witness, jurisprudence, and civil law; lectures by one trained in business administration on the subjects of accounting, business methods, etc.; and lectures on various practical subjects such as registration, selecting a place to practice, advertising, ethics, etc.

37. *FUNDAMENTALS OF ROENTGENOLOGY*. Second year, spring term. Credit one hour. Th 11. Professor DELAHANTY and staff. Technique of operation of modern equipment, X-ray protection, darkroom procedure, and fundamentals of diagnosis.

THE CLINICAL COURSES

Professors FINCHER, OLAFSON, LEONARD, DELAHANTY, LEVINE, ROBERTS, KIRK, RICKARD, FOX, BENTINCK-SMITH, FABRICANT, PECKHAM; Associate Professor LOOMIS; Assistant Professors BECK, HILLMAN, LOWE, ROSS; Medical Internes BARTHOLOMEW, LORENZEN, MATHER; Surgical Interns KRAMER; Assistants MORROW, VAN KRUIJNINGEN, GRIES, MELICK, THOMSON; Supervising Veterinarian GUTHRIE; Field Veterinarians FIELD, JOHNSON.

The practical application of the student's basic knowledge of veterinary medicine to the clinical diagnosis and therapy of disease begins in the third year of his course. During that year he is required to take Clinical Orientation, which introduces him to clinical work largely as an observer. His intensive training in clinical medicine and surgery begins in his fourth year, the greater part of which is devoted to actual handling of patients under close supervision of members of the clinical staff. The technical instruction is divided among four departments as follows:

The Ambulatory Clinic is operated by the Department of Medicine and Obstetrics.

The Consulting Clinic is operated by the Department of Surgery.

The Small Animal Clinic is operated by the Department of Small Animal Medicine and Surgery.

The Poultry Clinic is conducted by the Department of Avian Diseases. The work in autopsies and clinical pathology is conducted by the Department of Pathology and Bacteriology.

Information about the respective clinical divisions will be found under the course announcements of the departments concerned. Only students who have completed the first two years of the veterinary curriculum will be admitted to any one of the clinical courses.

Students must complete all prescribed clinical courses satisfactorily to be eligible for Graduation.

201. CLINICAL ORIENTATION. Throughout the third year. Fall term, M W 11; spring term, M T W Th 11-4:30. Professor LEONARD in charge.

Methods of clinical examination will be demonstrated, and selected cases from all the clinics will be presented and discussed.

202. CLINICAL CONFERENCES. Third year; spring term, F 12-1. Throughout the fourth year; fall and spring terms, F 12-1. Assistant Professor BECK in charge.

These conferences will be attended by all members of the fourth-year class and by staff members representing not only the clinical but the preclinical or basic sciences as well. Students will be required to present reports on their studies of selected cases from the clinics, and these will be criticized and discussed by the students and faculty members. In this way special knowledge and viewpoints of the anatomist, biochemist, physiologist, pathologist, bacteriologist, and parasitologist, as well as those of the clinicians, will be brought to bear on problems of diagnosis and therapy.

203, 204, 205, 206. CLINICS. Throughout the fourth year. Credit four hours each. Daily by assignment, including nights and Sundays when necessary. Professors LEONARD, DELAHANTY, FINCHER, BENTINCK-SMITH respectively.

During his fourth and final year the veterinary student is required to spend his time, after 9 o'clock daily, studying and ministering to the ailments of patients. He is on call, night and day, during the entire year. For this reason he is not permitted to carry extra academic courses, and outside part-time employment is not accepted as a valid excuse for failure to meet his full responsibilities in these courses.

Under a plan of rotation, students are required to work in groups in the four clinics so that they may acquire a varied experience. Work in one of the clinics may not be substituted for that in any of the others.

Work in clinical pathology and autopsies will be supervised by the Department of Pathology and Bacteriology. As a part of their clinical duties, students will be required to carry out, under the supervision of the clinical pathologist, such laboratory procedures as are indicated. If the patient dies, the same students who attended him during life will be required to conduct the autopsy and to make any pathological, bacteriological, or biochemical tests that are necessary to provide complete information on the nature of the disease, the reasons for failure of the therapeutic procedures used, and the cause of death.

COURSES IN THE VETERINARY CURRICULUM GIVEN BY OTHER DIVISIONS

College of Agriculture

1. *ANIMAL HUSBANDRY*. Introductory Animal Science. First year, fall term. Credit three hours. Lectures, W F 10. Morrison 146. Laboratory, W 11-1. Livestock Pavilion. Assistant Professor ELLIOT and assistants.

Designed to acquaint the beginning student with the development, scope, economic importance, problems, and language of the livestock industry. All commercially important classes of farm animals are considered, with emphasis on dairy cattle, beef cattle, sheep, and swine. The place of the biological sciences in a rapidly changing animal agriculture is stressed. The intent is to give insight into opportunities in the field, and to serve as an introduction to subsequent specialized courses.

11. *ANIMAL HUSBANDRY*. The Principles and Practice of Animal Feeding. First year, spring term. Credit three hours. Lectures, M W 8. Morrison 163. Laboratory T 2-4:30, Morrison 164. Associate Professor HOGUE.

Consideration is given to the basic principles of animal nutrition, nutritive requirements for various body functions; the identification, composition, and nutritive value of feeds, and the formulation of animal rations. The species covered include dairy cattle, beef cattle, sheep, swine, and horses, and there will be some consideration of dogs, cats, and other small animals. Special emphasis is given to nutritional problems relating to animal health.

124. *POULTRY HUSBANDRY*. Animal Genetics. First year, spring term. Lectures, T Th 9. Rice 300. Credit three hours. Professor HUTT. Problems and discussion, W 2-4:30. Rice 300.

Principles of genetics; sex determination and sex linkage; inherited characters in domestic animals, with special reference to lethal genes and genetic resistance to disease; progeny testing; inbreeding and crossbreeding.

Department of Military Science

The advanced Army ROTC Course is an elective open to those veterinary students who have credit for two years' basic Army, Navy, or Air Force ROTC, or who are veterans. The course requires attendance in three morning classes for one semester of each of the junior and senior years. During the other semester of the junior and senior years, the student substitutes a three-hour academic course in the field of communications, science, political theory, or psychology for credit in the ROTC program. In addition, two afternoon hours per week (2-4 T, W, or Th) during each semester of the junior and senior years are devoted to drill formations and leadership studies.

CAREERS FOR VETERINARIANS

THE FUNCTION of the Veterinary College is to educate young men and women to become practitioners, teachers, and research workers in the science and art of veterinary medicine. The College thus serves to protect the health of livestock, poultry, and companion animals, and to support public health programs.



An examination for thyroid function with radioactive iodine.

The veterinary medical profession offers excellent opportunities for those who have an abiding interest in the diagnosis, treatment, and prevention of diseases of animals. Like most medical careers it is a way of life requiring strong vocational motivation and dedication. It is a demanding career. The work often is rigorous. The compensation varies

greatly. One can seldom become wealthy as a veterinarian, but intelligent and conscientious service usually is rewarded by an adequate income. Those who are genuinely interested in the work have the satisfaction of serving a useful purpose. Some of the opportunities for veterinary graduates in the United States are described below.

PRIVATE PRACTICE

Veterinary practice is a wide field with excellent opportunities for well-qualified persons. Practice may be (a) general, in which the individual offers his services in dealing with all species of animals; (b) restricted to small animals, in which only pets are treated; or (c) specialized, in which practice is limited, for example, to diseases of poultry, diseases of horses, diseases of cattle. About two-thirds of the graduates of veterinary colleges become private practitioners.

SALARIED POSITIONS

About one-third of veterinary college graduates obtain salaried positions. The majority of these are with the federal, state, county, and municipal governments; the remainder with private corporations.

Private Corporations

Many veterinarians are employed by the large milk companies, by large stock and poultry farms, and by industrial laboratories that produce biologicals and pharmaceuticals for the prevention and treatment of diseases.

Governmental Agencies

AGRICULTURAL RESEARCH SERVICE, U.S. DEPARTMENT OF AGRICULTURE

This Service employs more veterinarians than any other single agency. The work is concerned for the most part with the prevention, control, and eradication of domestic and foreign infectious and parasitic diseases of milk- and meat-producing animals.

This Service also is responsible for assurance of safe, wholesome, and accurately labeled food products of animal origin. Regulatory veterinary medicine, based upon sound veterinary medical knowledge, supported by effective legislation, is planned and carried out in ways that will achieve the desired results while interfering least with the economic life of the community and nation.

Many veterinarians in this Service are engaged in full-time research programs on diseases of animals of economic importance in well equipped laboratories under the direction of the Animal Disease and Parasite Research Division.

VETERINARY CORPS, U.S. ARMY AND U.S. AIR FORCE

Veterinarians who are physically qualified men and graduates of veterinary colleges acceptable to the Surgeons General of the U.S. Army and U.S. Air Force and who elect to go on active duty are eligible to make application for appointment. Qualified candidates are appointed in the grades of first lieutenant to colonel inclusive, the grade being determined by the age, professional experience, and professional qualifications of the applicant.

THE U.S. PUBLIC HEALTH SERVICE

This Service employs veterinarians in the development and administration of programs concerned largely with the control of domestic and foreign diseases of animals transmissible to man. The Service cooperates extensively with international disease control agencies as well as with our state governments. In addition to maintaining active programs in research laboratories of its own, the Service engages in diversified contractual research programs with numerous academic institutions.

STATE GOVERNMENTS

Every state has a state veterinarian or similar officer, usually in the department of agriculture, whose duties are to look after the health of animals by enforcing laws and regulations drawn for this purpose. In many states the state veterinarian has a corps of assistant veterinarians.

Many state health departments have one or more veterinarians on their staffs to advise on animal diseases that have significance in human health and to investigate outbreaks of such diseases.

Almost every agricultural college has a veterinary department. Some of these employ five or six veterinarians as research workers and teachers. The veterinary colleges of the country have staffs of veterinarians working in a number of specialized disciplines. Teaching opportunities are numerous in every field of veterinary education.

MUNICIPAL GOVERNMENTS

Most cities employ graduate veterinarians on a full-time basis, and many towns and villages on a part-time basis, as members of their health departments. The duties of these men usually are connected with the sanitary control of meat and milk.

LEGAL REQUIREMENTS FOR PRACTICE

BEFORE one can practice veterinary medicine in the United States he must obtain a license from the state or states in which he locates his practice. This license generally is issued by the department of education or the department of agriculture on the basis of an examination set by a veterinary licensing board. Some states issue licenses without examination, by reciprocity when the applicant has been licensed in other states.

In New York the licensing agency is the State Education Department, Albany, New York. Examinations are given twice a year. Applicants are required to furnish evidence of adequate preprofessional as well as professional education, of good moral character, and of being at least 21 years of age. Application for the examination must be filed at least 30 days before the scheduled date and must be accompanied by a fee of \$40.

STUDENTS

GRADUATE STUDENTS, 1962-1963

- Alexander, Ronald W., B.S., M.S., Dryden
Anderson, John J. B., A.M., A.M.T., A.B., Haverhill, Mass.
Benjamin, Stephen A., B.A., New York City (Summer)
Bokelman, Delwin L., B.S., D.V.M., M.S., Southold
Buchnor, Arthur J. E., B.Sc., New Town, Ghana
Burda, Karina D., Vet. Phys., Ithaca
Campbell, Samuel G., M.V.Sc., B.V.M.S., M.R.C.V.S., Grief, Scotland
Cawley, Graham D., B.V.M.S., Surrey, England
Chambers, Mary M., B.S., M.S., Normal, Ala.
Collins, Henry M., B.S., M.A., Buffalo
Cummings, John F., B.S., D.V.M., Rochester
de Lahunta, Alexander, D.V.M., Dryden
Ebel, Joseph G., B.S., Newfield
Fouad, Mohammed T. A., B.V.Sc., M.Sc., Cairo, Egypt
Gevers, Alan I., B.S., M.A., New York City
Giattas, Christopher S., D.V.Sc., Nairobi, Kenya
Giordano, Anthony R., B.A., D.V.M., Glen Head
Glazer, Richard B., B.S., M.S., Middletown
Gupta, Ras B., B.V.Sc., Jhansi, India
Herzog, Rita K., B.S., M.S., Jerusalem, Israel
Hiltz, Frederick L., S.B.E.E., S.M.E.E., Milford, N.H.
Himes, James A., B.S., V.M.D., Daytona Beach, Fla.
Jenkins, Alice, A.B., M.A., Ph.D., Normal, Ala.
Kahrs, Robert F., D.V.M., Attica
Kallfelz, Francis A., D.V.M., Syracuse
Kaszynski, Edwin G., M.S., B.S., Chicago, Ill.
Kehoe, John M., D.V.M., Dryden
Kenney, Robert M., D.V.M., Springfield, Vt.
Leviton, Herbert, B.E.E., New York City
Marcus, Carol S., B.S., M.S., New York City
Mellick, Paul W., D.V.M., Shiloh, Ohio
Menzies, Robert A., B.S., M.S., Miami Beach, Fla.
Mercer, Paul F., D.V.M., Guelph, Ontario, Canada
Morrow, David A., B.S., D.V.M., Tyrone, Pa.
Patnaik, Basu D., G.B.V.C., D.V.P., Orissa, India
Pierard, Jean A., D.V.M., St. Hyacinthe, Quebec, Canada
Post, John E., B.S., D.V.M., Middlebury, Vt.
Roe, Walter E., B.S., D.V.M., Trumansburg
Ryan, Roderick K., B.V.Sc., M.Sc., Sydney, Australia
Sabry, Mohamed M. E., B.V.Sc., M.D.V., Cairo, Egypt
Shively, Arthur W., B.S., M.S., Ph.D., Lancaster, Pa.
Squire, Robert A., B.S., D.V.M., Fairhaven, Vt.
Strandberg, John D., B.A., Nelson, Minn. (Summer)

Tasker, John B., Jr., D.V.M., Hillsboro, N.H.

Tierney, Frederick B., B.S., D.V.M., Chittenango

Todd, Glen C., B.A., V.M.D., Crawfordsville, Ind.

Van Kruiningen, Herbert J., D.V.M., Ithaca

Watrel, Albert A., B.S., M.S., Ph.D., Cortland

Willoughby, Russell A., D.V.M., Guelph, Ontario, Canada

Witter, Richard L., B.S., D.V.M., M.S., Orono, Me.

Zarkower, Arian, D.V.M., M.S., Ontario, Canada

FOURTH YEAR, CLASS OF 1964

Baker, Karl George, Kenmore

Bartfay, Joseph Valentine, Rensselaer

Barua, Reuben Daniel, Kiambu, Kenya

Baum, Alan Carl, Brooklyn

Belden, James Sheffield, Fredonia

Benjamin, Stephen Alfred, New York

Berger, Charles Jay, Bayside

Bochringer, Bruce Taylor, Buffalo 16

Brown, Walter Ray, Peach Bottom, Pa.

Bryant, Everett Sanford, Union, Me.

Burleigh, Gary Lee, Snedekerville, Pa.

Campbell, Joseph, Newburgh

Cruden, Janet Elizabeth, Berea, Ohio

Dorney, James Michael, Pleasant Valley

Dube, Leo Robert, Hudson, N.H.

Dudley, George Clayton, Jr., Auburn

Edwards, Nathan Joel, Water Mill

Eisner, Edward Rothschild, New York

Engstrom, David Stanley, Wallingford, Conn.

Ettinger, Stephen Joel, Rego Park

Evans, Wayne O'Dell, Collins

Fackelman, Gustave Edward, Southampton

Frank, Richard Arthur, Goshen

Fudens, John Henry, Dear Park

GROUT, Alan Jacob, Waterbury, Vt.

Haberle, Albert John, Purdy's Station

Johns, Dan Earnest, Conneautville, Pa.

Kaplan, Meyer, Laurelton

Katz, Michael Lincoln, Flushing

Kaufman, Robert Paul, Rochester, Pa.

Keenan, Lawrence Thomas, Copenhagen

Keller, Robert Eugene, Vernon Center

Leonard, John Lynn, Forest Hills

MacKenzie, Neil Alben, Boylston, Mass.

Meerhoff, George Ellsworth, Clymer

Montali, Richard James, New London, Conn.

Morey, Peter Lloyd, Lexington, Mass.

Munson, Reverdy Leigh, Rochester

Nestved, Arthur Jack, Ripley

Nydam, Charles William, Oneonta

Olson, Carl Thomas, Selkirk

Pettit, Thomas Harry, Port Crane

Quinn, Charles Barry, Dewitt

Radcliffe, Harold Jackson, Auburn

Robison, Milton Alexander, East Wallingford, Vt.

Rymph, Donald Ernest, Greenwich

Scanlan, Gerald Gerard, Altamont

Schloeder, Paul Joseph, Long Island City

Sidler, Mary Christine, Rochester

Smith, Avery Leete, Bellows Falls, Vt.

Strandberg, John David, Nelson, Minn.

Trewick, Edward George William, Kingston, Jamaica, B.W.I.

Turner, Benjamin Frank, Durham, N.H.

Wenger, Daniel Martin, Goshen, Ind.

Wright, Roy Lee, Mineola

THIRD YEAR, CLASS OF 1965

Balogun, Peter George Tunde, Benin & Auchi, Nigeria

Barber, Dwight Beecher, Hamden, Conn.

Bartholf, Lawrence Wilbur, Batavia

Bistner, Stephen Ira, New York 24

Braide, Victor Bowerson Chase, Enugu, Nigeria

- Braun, Robert Kenneth, Clinton, N.J.
 Burgett, Anthony Charles, Edinboro, Pa.
 Campbell, Robert Colby, Woodsville, N.H.
 Cone, James Fenton, Jr., Cold Spring
 Cox, Victor Stuart, Jr., Wayne, N.J.
 Dedrick, Robert Stanton, Tuckahoe 7
 Faivus, Jeffrey Bruce, Huntington
 Gordon, Edward Ira, Oceanside
 Graham, David Lee, New Canaan, Conn.
 Hall, Edward Gurden, Johnson City
 Hammond, David Baird, Fort Plain
 Hayden, David Winston, Auburn
 Hayes, Kenneth Cronise, Guadalupe, Calif.
 Hertzendorf, Irving Isaac, Laurelton
 Higgins, Jerome Brion, Midlane
 Hill, Richard Albert, Centerdale 11, R.I.
 Hull, Bruce Lansing, Ravena
 Jacobson, Robert Joseph, Wallkill
 Kahn, Donald Edward, Flushing 55
 Kopec, John David, Lackawanna
 Lamb, Lawrence Allan, Whitestone 57
 Lange, Richard Carl, Jamaica 32
 Lansing, William Edwin, Albany
 Legler, Robert James, Albany
 Leslie, John Allen, Ramsey, N.J.
 Loew, Franklin Martin, Syracuse
 MacLeod, Ian Fullerton, Ithaca
 Meader, Charles Pennell, Waterville, Me.
 Morse, James Royal, Staatsburg
 Muddell, Clifford George, Madison, N.J.
 Mullancy, Thomas Patrick, Corning
 Peddie, James Frederick, Montoursville, Pa.
 Poggi, Louis Richard, Engelwood, N.J.
 Proskine, Tyler Robinson, Oxford
 Pulver, Robert Irwin, Phelps
 Reeve, Linda Dixon, Riverhead
 Reiter, Martin Bruce, E. Meadow
 Rind, Brian Irwin, Stone Ridge
 Savage, Edward Lee, Summit, N.J.
 Sbarra, Jeremiah Nicholas, Garden City So.
 Scherzo, Carmen Samuel, Kearny, N.J.
 Schoemann, Ralph Samuel, Owego
 Schwartz, Alan Elliot, Yonkers
 Shapiro, Martin Paul, New York
 Sharp, Ronald Kay, Omaha, Nebraska
 Stokes, Mark Holmes, Mahopac
 Streett, John Walter, Jr., Ghent
 Terry, John Melvin, Oceanside
 Thackaberry, Richard Gerwin, Douglaston
 Thoma, Richard Edward, Canastota
 Thomas, Jim Dale, Cortland
 Tremper, Wayne Evan, Campbell Hall
 Veit, Hugo Paul, Altamont
 Whitefield, John William, Staten Island
 Whitlock, Robert Henry, Troy, Pa.

SECOND YEAR, CLASS OF 1966

- Adams, Randolph Martin, Hingham, Mass.
 Alberding, Robert Milton, Waterville
 Anderson, Glenn Arnold, Flushing 65
 Andresen, John Edward, Wappinger Falls
 Basciano, Peter Stephen, Flushing 66
 Beck, Gary Fred, Hillsdale
 Burke, Jack, New Rochelle
 Bushnell, Richard Warner, Manchester, Conn.
 Cady, Errol John, Valley Falls
 Cane, Gary M., Brooklyn
 Christopher, Arthur William, Brentwood
 Collins, Donald Ray, Berwick, Me.
 Conway, Danice LaVerne, West Monroe
 Deitchman, Jonathan, New York 63
 Dwyer, John Alois, Buffalo 6
 Fernandez, Geoffrey LeRoy, South Dartmouth, Mass.
 Fowles, Wayne Joel, Southampton, Mass.
 Garman, Robert Harvey, Hastings-on-Hudson

Goldstein, Norman Harold, Dewitt
 Hansen, John Peter, Ballston Spa
 Harris, Margaret Ann, Auburn
 Harvey, Gale Howard, Saxonburg, Pa.
 Herzig, Lee James, Beechhurst 57
 Hess, Frederick Fleming, Millerton
 House, James Anthony, Auburn
 Jones, Thomas Richard, Elma
 Jordan, Elizabeth Katherine, Astoria 6
 Kennett, Paul Donald, Methuen, Mass.
 Lacroix, Jeffrey Alan, Easton, Conn.
 Mach, Frederick Paul, Cheshire, Massachusetts
 Moorhouse, Arnold Sydney, Westerly, R.I.
 Mountan, Paul Christopher, Yorktown Heights
 Nelson, John Hjalmar, Jamestown
 Newman, Harry Samuel, Buffalo 16
 Nilles, Bernard John, Pittsburgh 37, Pa.
 Nowak, Edward Joseph, Hamburg

Paeplow, John William, Snyder
 Palin, Charles Herbert, Jamesville
 Pescod, Thomas Richard, Wantagh
 Platt, Kenneth Bradley, Cranbury, N.J.
 Pollock, Melvin Gene, Union City, Pa.
 Reese, David George, Pine City
 Sancho, Victor, Georgetown, British Guiana
 Scribner, Peter Lowell, Portland, Me.
 Silverman, Jerald, Brooklyn 19
 Smith, Ernest Karl, Merrick
 Tarr, Benjamin Dale, Gradyville, Pa.
 Thomas, Charles Leonard, Frackville, Pa.
 Ward, Jerrold Michael, New York 62
 Witmer, John Ralph, Webster
 Wolf, Martin, Yonkers
 Wolfe, David August, Barker
 Youmans, Ray Sedic, Jr., Andover, Mass.
 Zimmer, Charles Paul, Rochester 20

FIRST YEAR, CLASS OF 1967

Averill, Damon Rivers, Jr., Kenmore
 Beyer, George John, West Seneca
 Bliss, DeGraff Everett, Jr., Whitesboro
 Bliss, Ernest Lippincott, Rindge, N.H.
 Blume, Jean Ruth, Oyster Bay
 Brown, Garrison Mack, East Marion
 Burroughs, Richard John, New Berlin
 Cary, Arnold Dean, Shrewsbury, Mass.
 Ceglowski, Eugene Charles, Rupert, Vt.
 Cook, Roger Benham, Potsdam
 Dennis, Robert John, New Hyde Park
 Dillmann, Christopher, Bellmore
 Eskeli, Matthew William, East Randolph
 Franzek, James Conrad, Alden
 Gardner, Michael Hugh, Corfu
 Garman, John Lewis, Jr., West Hartford 7, Conn.
 Gaskin, Jack Michael, Watertown
 Goetchius, Paul Francis, Monroe
 Gorra, Ferris George, Yonkers 5
 Greenberg, Michael Lawrence, Brooklyn 35

Hackathorn, Thomas Arthur, Slippery Rock, Pa.
 Hart, Douglas William, White Plains
 Hilt, John Wesley, Ithaca
 Holden, Herbert Roger, Shrewsbury, Mass.
 Hopcraft, Peter Norman, Njoro, Kenya
 Ingraham, Allan John, Thorndike, Me.
 Johnson, Frederick Wingate, Southampton, Mass.
 Kaplan, Joshua Meyer, Brooklyn 19
 Karpas, Dov, Jerusalem, Israel
 Kaufmann, Gerard Augustus, Jr., White Plains
 Krakowsky, Jeffrey Norman, Brooklyn 20
 Leahey, James Martin, Lee, Mass.
 Leavitt, Edward Wilfred, Eliot, Me.
 Martin, Edward Glenn, Jamestown
 Mathews, Leslie James, Ithaca
 McMillan, Harry Thomas, Watertown
 Meiczinger, James Leslie, Ithaca
 Miller, Lloyd Edward, Troy

Missenis, John Joseph, Troy
 Myer, Carole Wendy, Glen Cove
 O'Keefe, Robert Charles, North Nor-
 wich
 Olin, Keith Merriam, Oriskany
 Parrish, David Curtis, Paris, Ky.
 Peddie, Donald Edward, Montoursville,
 Pa.
 Potter, James Carleton, Homer
 Powell, Josef Mark, Fredonia
 Rumsey, Leon David, Smethport, Pa.
 Schuchman, Phillip Barry, Bayside 60
 Schwartz, Victor Jene, Wantagh
 Scholm, Douglas Paul, Galway

Sequist, David Bea, East Hartford 8,
 Conn.
 Snell, Glen Donald, Marcellus
 Stein, George, Jr., Ridgewood, N.J.
 Stephenson, Robert James, East North-
 port
 Walker, Jonathan Pearson, Newtown,
 Pa.
 Warriner, Wayne Francis, Greenwood
 White, Karl Karey, III, Media, Pa.
 Wiest, Richard Dale, West Lawn, Pa.
 Wilson, Terrance Michael, St. James
 Witter, Alan Francis, Richmond 27, Va.



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